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# Exhibits

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Rogers et. al.

Web Browser Based Computer Network  
for Processing Vehicle Rental Transactions  
ON A LARGE SCALE

Ref. No. 1017-8583

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# How to Use the Specialty Vehicle System

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*Date Created: October 12, 2001*

*Date Updated: October 17, 2001*

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2. Logging On
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## 1. Introduction

The **Specialty Vehicle System** has been created for use in Enterprise Rent-a-Car Branch locations. The goal of the system is to allow Branch personnel to more effectively rent specialty vehicles to customers. Specialty vehicles are vehicles such as minivans, pick-up-trucks, luxury vehicles, etc. Since these types of vehicles are not easily tracked by the standard Enterprise information systems, a separate software program was created.

The Specialty Vehicle System is essentially a reporting tool that accepts a Branch location, a vehicle type, and a date range as input. The resulting report is a color coded grid which displays all of the vehicles at the given Branch and their current rental status. The report can then be used by the Branch personnel to decide whether or not the requested specialty vehicle is available to be rented to a customer.

## 2. Logging On

In order to launch the Specialty Vehicle application, the user should click on the Specialty Vehicle icon located on their desktop. Clicking on the icon will launch the local Web browser and take the user to the Specialty Vehicle Login page. Since the application is Web based, all interaction will take place through the Web browser. The login page is shown below:



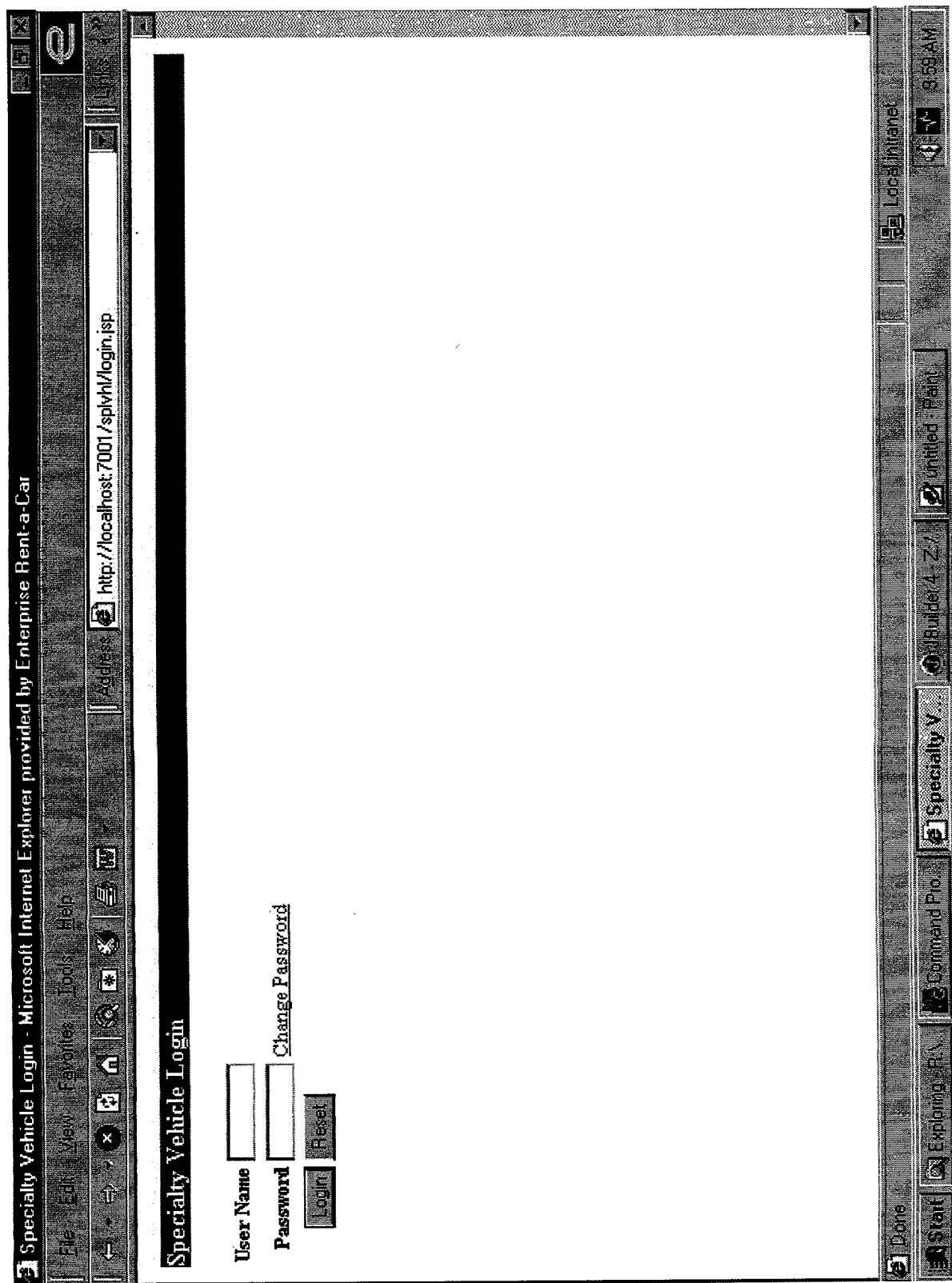


Figure 1: Login Screen

To log in, the user enters his or her Enterprise user name and password and hits the login button. If the user is logging in for the first time or if the user clicks on the "Change Password" link, then the user is presented with the following Change Password screen.

The screenshot shows a Microsoft Internet Explorer window titled "Specialty Vehicle - Change Password - Microsoft Internet Explorer provided by Enterprise Rent-a-Car". The address bar displays "http://localhost:7001/splvhl/changePassword.jsp". The main content area has a title bar "Specialty Vehicle - Change Password" and contains the following form:

User Name

Password

New Password

Verify Password

Change  Reset

The browser's status bar at the bottom shows "Done", "Start", "Exploring", "F.V.", "Command Pro...", "Specialty V...", "Builder 4...", "login.bmp - Paint", "Local Internet", and the time "9:59 AM".

**Figure 2: Change Password Screen**

In order to change one's password, the user must enter his or her user name, old password, new password, and a verification of the new password. After entering the data, hitting the "Change" button will submit the user's new information and log the user in.

### 3. **Entering Search Criteria**

After the user has successfully logged in, the user will be presented with an interface for entering the vehicle search criteria. An example of the search screen is shown below.

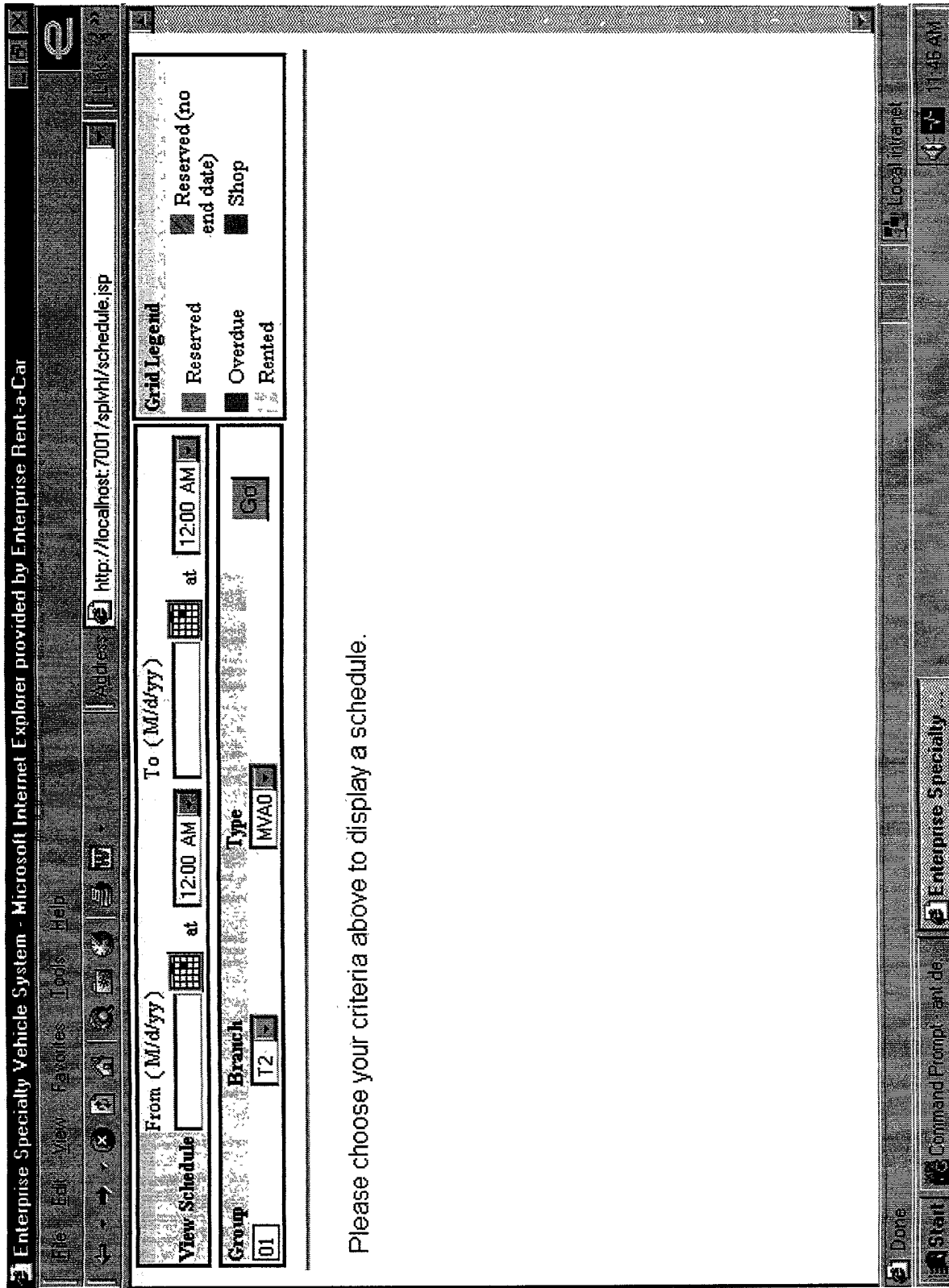


Figure 3: Search Criteria Screen

The user must enter the "From" and "To" dates and times they wish to check on a vehicle's availability. The date must be in the format displayed on the screen, which is the normal date format for the user's locale. For instance, June 12, 2002 would be represented as 06/12/2002 for the United States, or 12/06/2002 in Canada. The date fields will attempt to format the date properly using JavaScript. Clicking on the "calendar icon" next to the date entry boxes will cause a selectable pop-up calendar to be presented to the user. The following screen shot illustrates this feature.

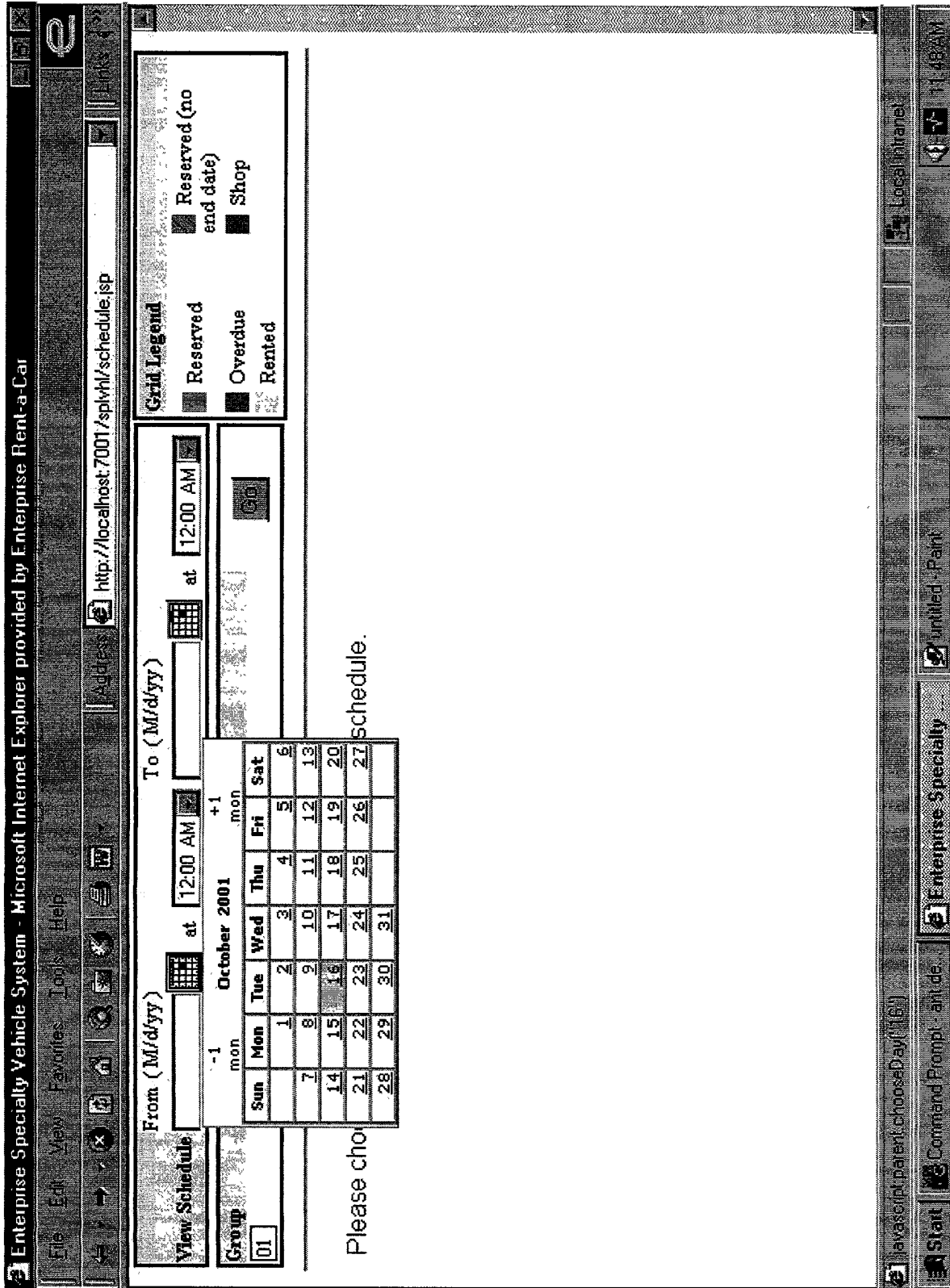


Figure 4: Search Criteria Screen with Pop-up Calendar

The remaining inputs required by the user are the "Group", "Branch", and "Type" fields. The Group field is populated when the user logs in and is not editable. The Group field is dependent on the location from which the user is accessing the application. The Branch drop down contains all of the Branches within the Group. The Type drop-down contains a list of all of the specialty vehicle types within the Group.

After the user enters all of their desired inputs, the user can initiate the search by hitting the "Go" button.

#### 4. **Interpreting the Results**

##### **Report Format**

As stated above, the resulting report will consist of a grid with dates across the top as column headings and vehicle descriptions down the side as row labels. The date columns are delineated by thicker lines and each day's midpoint is denoted by a thin line. The row labels will list the first four characters each of the vehicle's make and model.

##### **Report Data**

The colored bars that span the grid represent the availability of each vehicle. The color key is shown to the right of the search criteria. Each color represents a different vehicle status. The bars also contain the last name of the prospective customer and a rental code that denotes the type of rental: "R" stands for "Retail", "C" stands for "Commercial", "I" stands for insurance.

##### **Grid Legend**

- o Green - Reserved Vehicles: Vehicles that have not been rented but have an existing reservation pick up and return date.
- o Green with hash marks - Reserved (no end date): Vehicles that have not been rented but have an existing reservation pick up date but no return date.
- o Red - Overdue: These are vehicles that are currently on rent but have exceeded their estimated return date.
- o Blue - Shop: These are vehicles that are currently in the shop.
- o Yellow - Rented: These are vehicles that are currently on rent and are due back at the estimated return date.

The following is an example of specialty vehicle report.

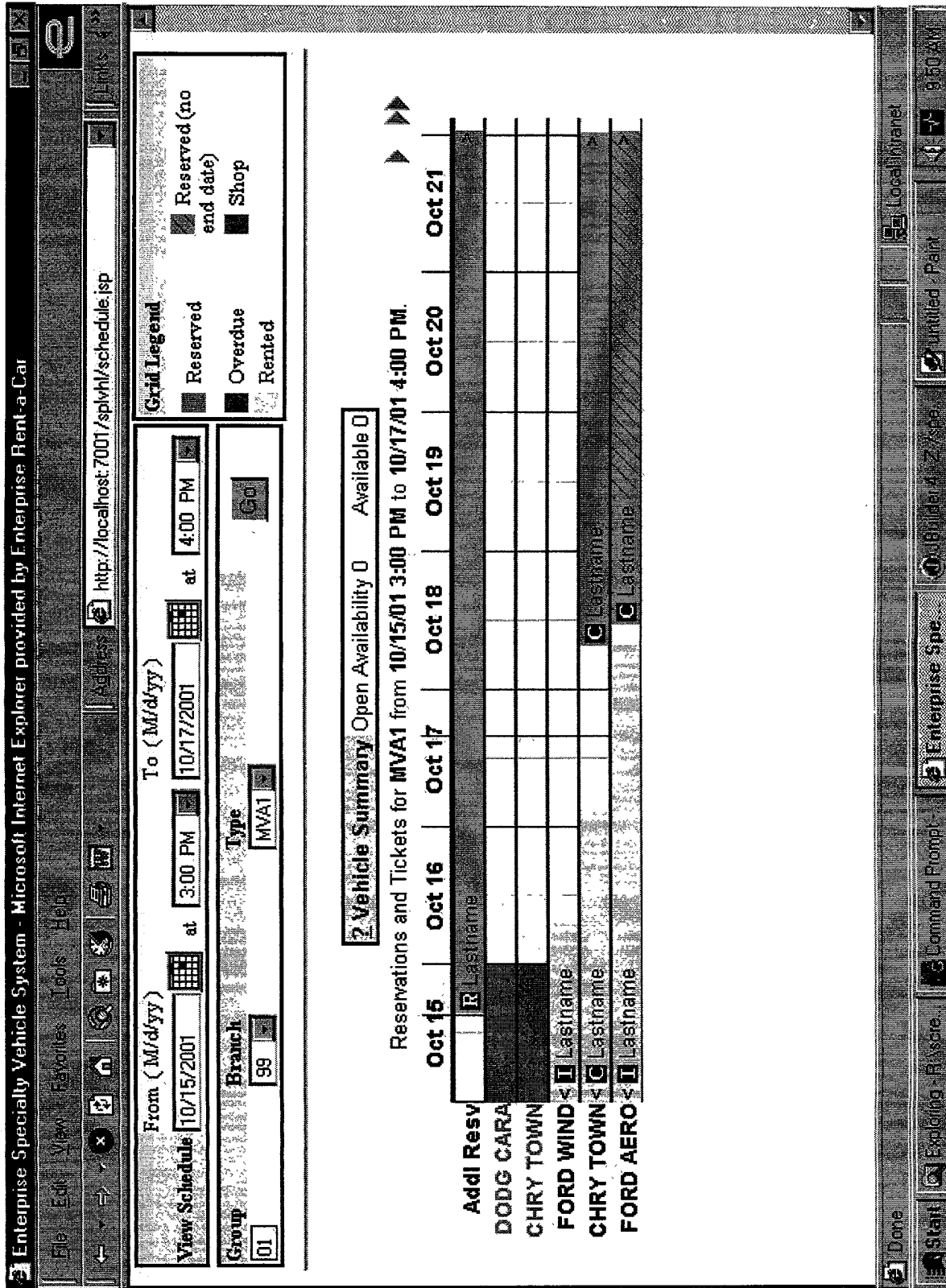


Figure 5: An Example Specialty Vehicle Report




In the above example, there are two shop vehicles (shown in blue), three vehicles currently on rent (shown in yellow), and three future reservations. Note that the top vehicle is labeled "Addl Resv". This is an "Additional Reservation" or overflow vehicle that does not currently exist at the specified rental branch. Additional Reservation placeholders will appear on the report when there are more reservations than there are vehicles. Also note that "<" and ">" brackets appear at the beginning and end of rentals and reservations when the availability bar continues on past the presented time frame.

In general, rentals and reservations will be ordered in the following manner:

- Overflow vehicle placeholders will appear at the top of the list. These placeholders will be labeled "Addl Resv" for "Additional Reservation".
- Shop vehicles will appear next in the list.
- Overdue vehicles will appear next in the list.
- Currently rented vehicles will appear at the bottom of the list. Rented vehicles are ordered by the expected return date, with the earliest return dates coming first.

Reservations will be placed on open vehicles first, rented vehicles second, overdue and shop vehicles third, and finally on placeholder vehicles.

### **Moving Forward In Time**

The user can adjust the time frame of the report by adjusting the date ranges in the search criteria at the top of the screen or they can use the arrow-shaped buttons  in the upper right hand corner of the report. Clicking on the single arrow will advance the report one day. Clicking on the double arrow will advance the report by the number of days shown. The default is to show a 7 day window. However, a search window of more than 7 days will expand the window up to a maximum of 10 days. A "back" arrow button will appear in the upper left hand corner of the report after an advance has been made. This button will take the user back to the original time frame.

### **Vehicle Summary**

The Vehicle Summary information appears in a box above the report grid. The summary shows how many vehicles are currently available for rent in the specified time frame. The following screen shows an example of a Vehicle Summary report with data.

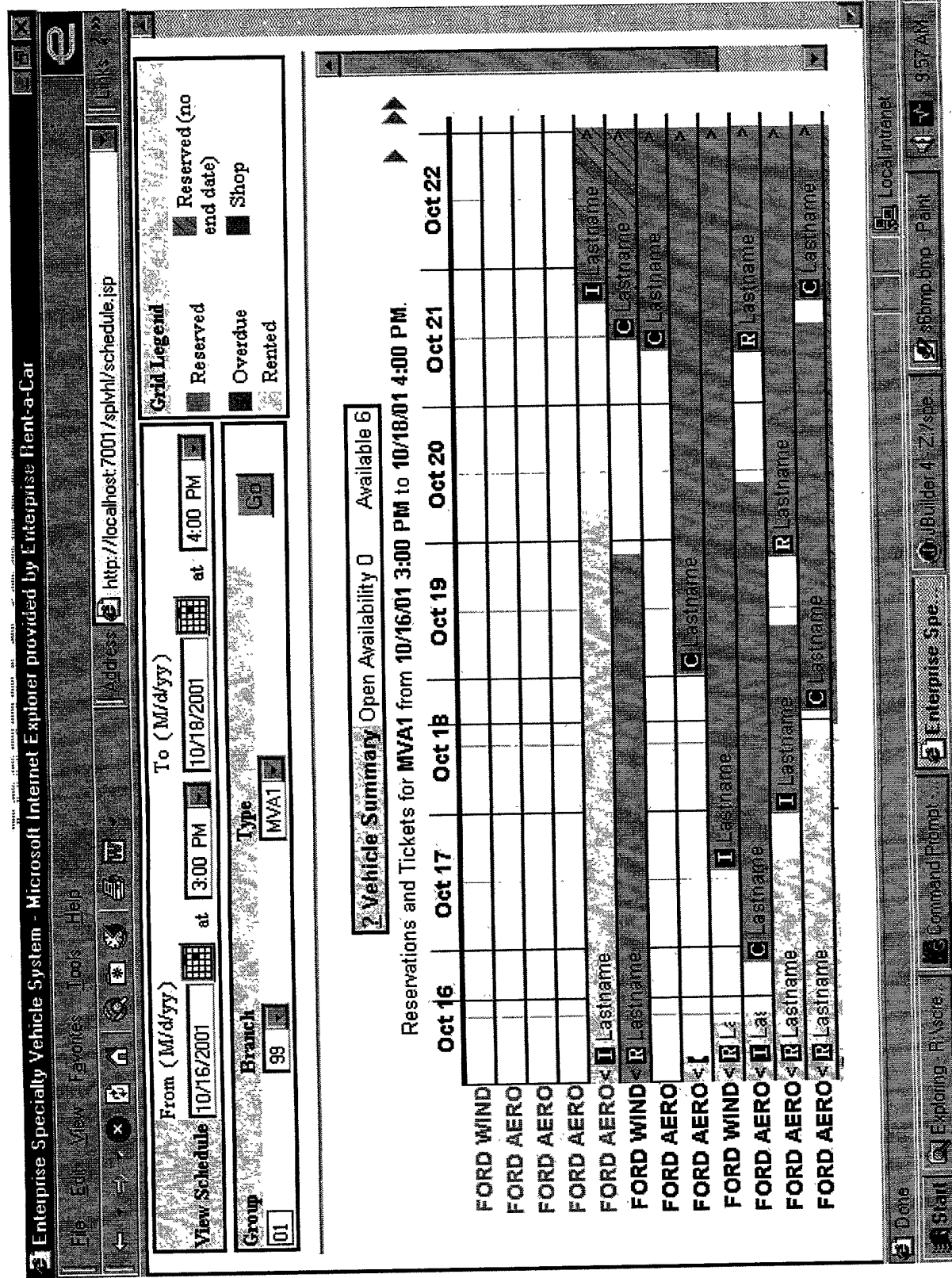
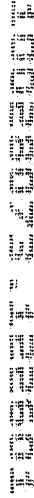


Figure 6: Vehicle Summary Report with Data

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In the figure above the user has entered a date range from **3:00 PM on 10/16/2001 to 4:00 PM on 10/18/2001**. Note that in the report, the specified time frame is highlighted in yellow down the length of the page. The Vehicle Summary indicates that the "Open Availability" is 0 and the number of "Available" vehicles is "6". This means that there are 6 vehicles that are currently available for reservations within the specified time frame. "Open Availability" is 0 because there are no vehicles that are currently open within the specified time frame that are also open 14 days prior to the specified time frame. Clicking on the "?" in the Vehicle Summary box will display additional help for the summary. The help text for the Vehicle Summary is shown below.





## 5. Internationalization

The Specialty Vehicle application is currently available in English and French Canadian. The language and date format selection is based on the Group Branch that the user is logging into the application from. An example of a French Canadian display is shown below.

file://C:\WINDOWS\Temporary%\Internet%\20Files\OLKC173\How%\20to%\20Use%\20the%\20Specialty%\20Vehicle%\20Syste... 12/20/01

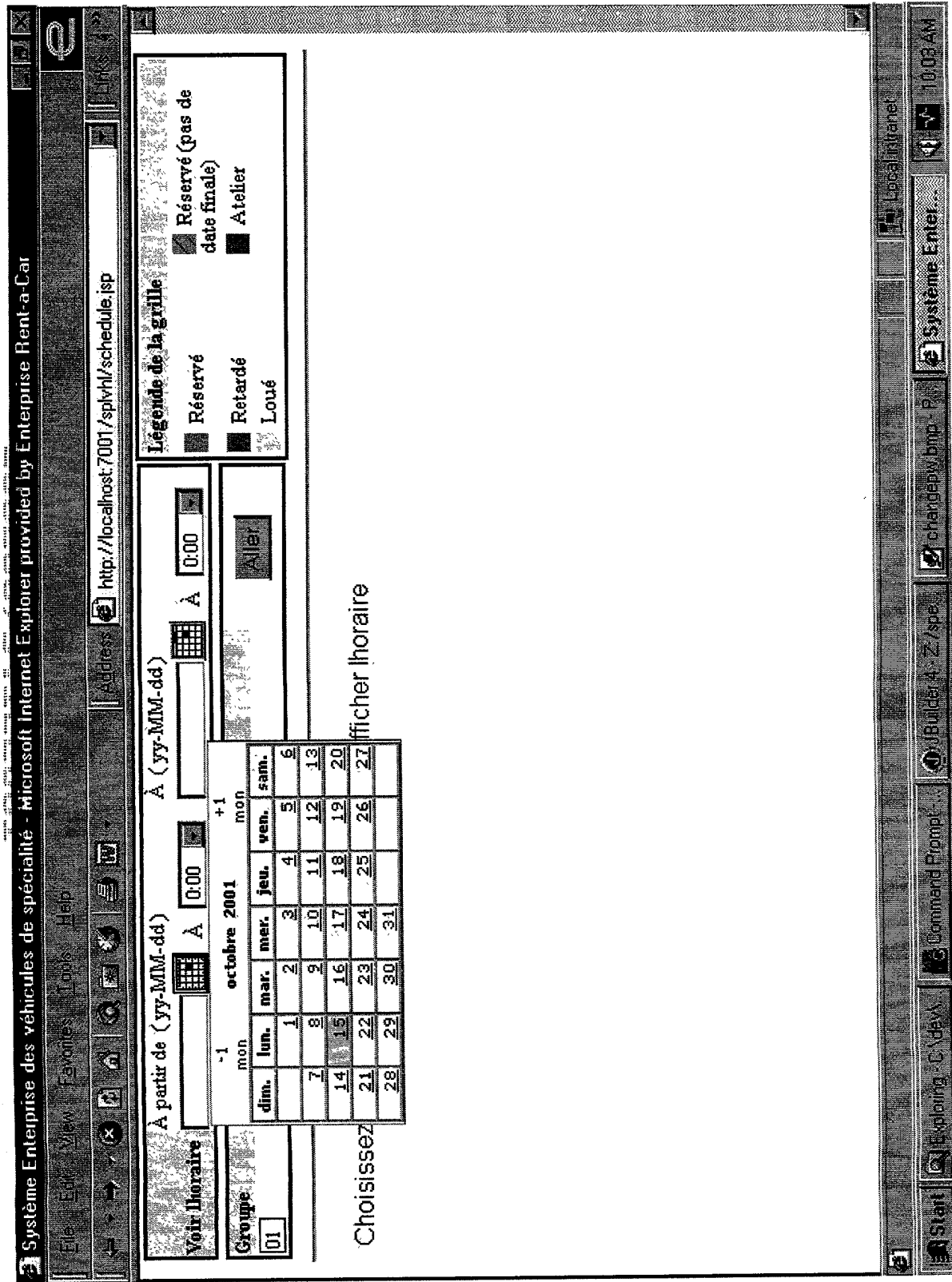
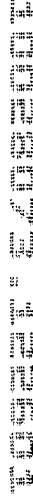


Figure 8: A French Canadian Version



## 6. Specialty Vehicle FAQ: Frequently Asked Questions

- o Q: Can I look at reservations that have occurred in the past?
- o A: No. The Specialty Vehicle System can only present rentals and reservations from the current day forward. You cannot look into the past.

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**Enterprise Rent-A-Car**

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**Rental Redesign  
ECARS 2.0 Architecture**

**Version 1.0**



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## Revision History

Date	Version	Description	Author
11/9/2001	1.0	Document Created	Casey Levin

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# ECARS 2.0 Architecture

## 1. Introduction

The ECARS 2.0 application is an operational system designed to support Enterprise Rent-a-Car's Rental line of business. The application will ultimately replace the existing AS/400 based ECARS 1.0 application. However, due to external dependencies, integration to the existing system is an integral part of the new ECARS application.

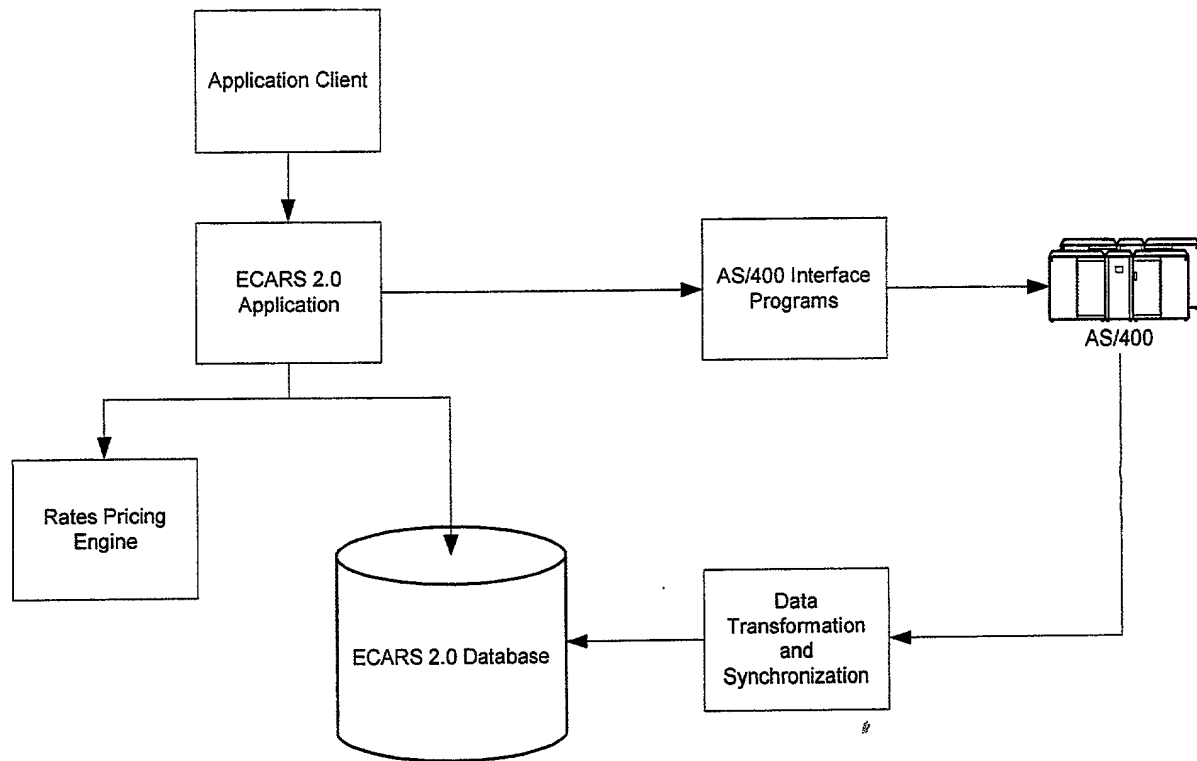
The following document is intended to describe the overall architecture of the ECARS 2.0 system at a conceptual and logical level. For physical implementation specifics reference the documents specified in Appendix A.

## 2. Conceptual Architecture

At it's highest level, the ECARS 2.0 system is composed of seven main components; the Application Client, Web Application; AS/400 Interface Programs, AS/400, ECARS 1.0 to ECARS 2.0 Synchronization, ECARS 2.0 Database, and the Rates Pricing Engine.

The Application Client represents any client to the application. This includes the web based user interface, or external application interfaces. The Web Application encompasses the ECARS 2.0 business logic as well as the logic to render the pages for the user interface. The AS/400 interface programs are used to leverage functionality from the existing AS/400s or to synchronize data with them. The AS/400s process several applications including the current ECARS 1.0. The ECARS 1.0 to ECARS 2.0 Synchronization is used to synchronize data from the AS/400 to the ECARS 2.0 application. The ECARS 2.0 Database serves as the main data storage for the ECARS 2.0 application. Finally, the Rates Pricing Engine is the component used to generate all Rate related information for ECARS 2.0 and future external applications. Each of these components will be discussed in more detail in the subsequent sections.

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**Figure 1 - ECARS 2.0 Conceptual Architecture**

### 3. Logical Architecture

#### 3.1 Application Client

##### 3.1.1 Thin Client

The ECARS 2.0 application has been designed to utilize a thin client for the user interface. The generated HTML pages are generally lightweight with no applets and minimal JavaScript. These pages are displayed in an Internet Explorer browser running on a terminal server at the branch. This allows for minimized deployment complexities while leveraging currently available technologies.

While most features utilize traditional Web technologies, the ECARS system has a requirement to know the physical location of a request. This requirement is not inherently supported using Web technologies. Therefore, the ECARS application leverages a script running on the Terminal Server to access the Active Directory and create a cookie with the user's physical location. This cookie is retrieved by the ECARS application to determine the physical location of the request.

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### 3.1.2 External Clients

The Enterprise Rent-a-Car environment consists of several applications whose combined responsibility is to support the day-to-day operations of the company. The ECARS 2.0 application has been designed to leverage some of these existing assets as well as provide functionality to others. These external clients support differing levels of communication and integration. Therefore, to support the wide range of application interfaces, the ECARS 2.0 application has been designed to support four main methods of integration: JMS Messaging, RMI, Web Services, and the WebLogic/Tuxedo Connector.

Currently, JMS messaging is being considered for asynchronous calls from external clients. The JMS message would be consumed by a Message Driven Bean within the ECARS 2.0 Web Application and processed accordingly.

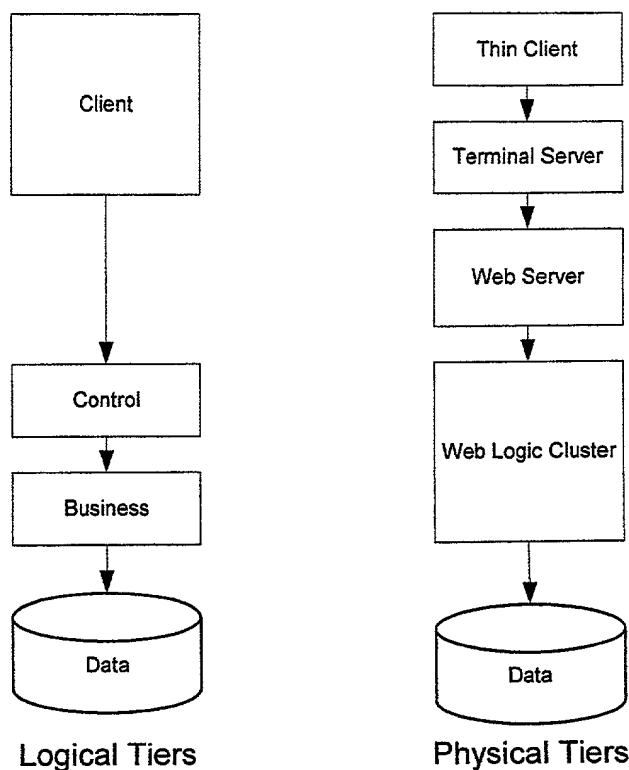
Alternatively, for synchronous calls, the ECARS 2.0 Application can support RMI and Web Service calls. However, the Web Service approach is currently favored over direct RMI calls. This is due to the looser coupling between applications using the Web Service approach.

Finally, the WebLogic/Tuxedo Connector will be utilized to provide an interface for Tuxedo based applications to leverage ECARS 2.0 functionality. This allows WebLogic to appear as a Tuxedo domain and thus allows a Java process to appear as a Tuxedo service. Therefore, external Tuxedo services will be able to call a Java process using the same method as it would to call a different Tuxedo service.

## 3.2 ECARS 2.0 Web Application

The ECARS 2.0 Web Application has been designed to leverage Java, J2EE and browser based technologies. Its implementation relies heavily on industry standards, design patterns, and best practices. When looking at the application functionality, it can be segregated into four Logical tiers that are deployed onto several physical tiers.

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**Figure 2 - ECARS 2.0 Web Application Tiers**

The Client tier represents a thin client user interface. This interface contains very little business logic and consists solely of HTML pages with JavaScript. These pages are rendered within an Internet Explorer browser and are generated from Java Server Pages.

The Control tier is responsible for generating the HTML/JavaScript pages, managing navigation, transforming data, and performing field level validations (e.g. did the user enter a numeric value in a numeric field).

The Business tier consists of the logic for the application business rules, validations, and data interactions. These are implemented using EJBs and Java Classes.

The Data tier represents the data storage for the application

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Currently, these four Logical tiers are deployed onto several Physical tiers. The Client resides within a Web Browser running on the Terminal Server and a Thin Client. The Control and Business Logical Tiers are currently deployed on a cluster of WebLogic servers. The Data Tier resides on an Oracle 8i database. Due to the dynamic nature of the application, no static content resides on the Web Server cluster. However, while the Web Server provides no application functionality, it is required to support load balancing and failover for the WebLogic cluster.



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### 3.2.1 Web Application Components

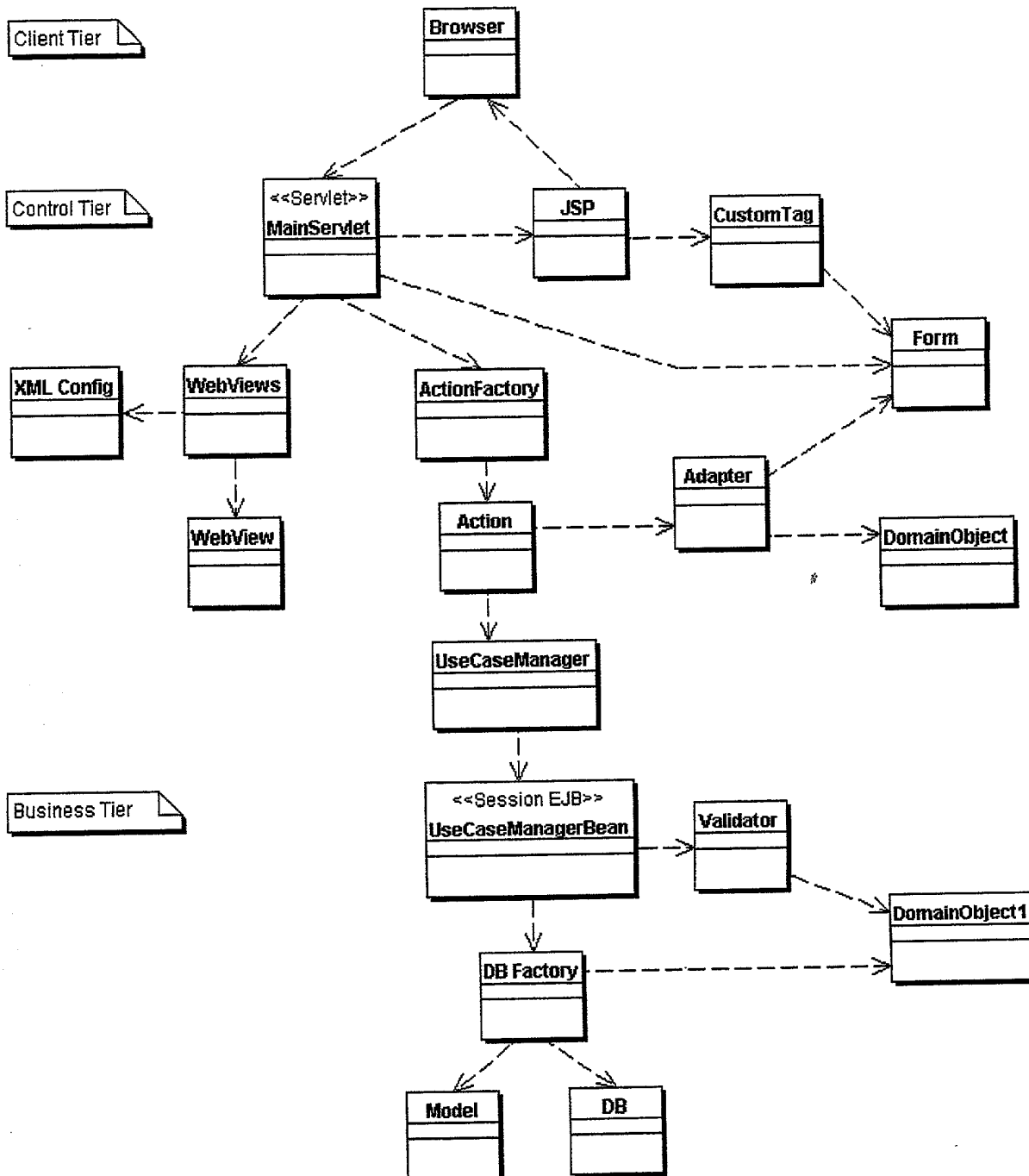


Figure 3 - ECARS 2.0 Web Application Components

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#### 3.2.1.1 Action

The Action encapsulates any processing logic that was requested or required prior to displaying a page or when leaving a page. For example, if a request is made to save a reservation, an Action will delegate to other objects and ensure the data is aggregated correctly. If so, the Action will initiate a call to a Use Case Manager to ultimately save the data.

#### 3.2.1.2 Action Factory

The Action Factory is responsible for creating instances of Actions and pooling them for reuse.

#### 3.2.1.3 Adapter

The Adapter is a data mapping mechanism to transfer data between the Form and the Domain Object.

#### 3.2.1.4 Browser

HTML and JavaScript based user interface.

#### 3.2.1.5 Custom Tag

Custom Tags are Java objects used to encapsulate presentation logic required to present dynamic content from the JSP. Example tags include a tag to create an HTML table of drivers, a color indicator based on reservation status, etc.

#### 3.2.1.6 DB

The DB contains all of the SQL for transactions with the database.

#### 3.2.1.7 DB Factory

The DB Factory transforms data between Domain Objects and Model Objects. One Domain DB Factory may call another one to support more complex transactions. For example, to save a reservation, a Reservation Domain (with associated Driver Domain, Bill To Domain, etc.) will be passed to a Reservation DB Factory. The Reservation DB Factory will then delegate to other factories as required to process other Domains such as Driver and Bill To. The DB Factory may also serve as a data cache if required.

#### 3.2.1.8 Domain Object

The Domain Object is a data holder for information passed through the system. These are typically business objects such as a Reservation or a Driver.

#### 3.2.1.9 Form

The Form is a data holder for information required during a user session. Typically, these objects are more coarse-grained than a Domain Object and represent aggregated data required for the display of a page.

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#### 3.2.1.10 JSP

The JSP is responsible for creating an HTML page based on dynamic data. It does so by executing on the application server with a combination of HTML, JavaScript, and calls to Custom Tags.

#### 3.2.1.11 Main Servlet

The Main Servlet is responsible for receiving all requests made from the browser. The Main Servlet takes data from the request and places it into a Form for processing. While doing so, the Main Servlet will utilize helper classes to perform field level validations such as a valid date entered in a date field. The actual application processing is delegated from the Main Servlet to an Action.

#### 3.2.1.12 Model

The Model is an object representation of a result set from a data source. These objects are used to provide an additional layer of isolation between the data structure and the Domain Objects within the application.

#### 3.2.1.13 Session

The Session (not pictured above) is used to temporarily store data specific to a user's interaction with the system. Typically, Forms or Domain Objects will be stored with the Session to enable application processing. These objects are typically removed when a user leaves a page and the data is no longer required.

#### 3.2.1.14 Use Case Manager

Encapsulates a call from the Action to the Application Layer.

#### 3.2.1.15 Use Case Manager Bean

The Use Case Manager Bean is responsible for implementing business logic in the Application Layer. The Use Case Manager Bean is responsible for managing the complete transaction with the database.

#### 3.2.1.16 Validator

Validator objects are responsible for validating a Domain Object. Validators are specific to a Domain Object and can be "chained" together to enable stricter validation rules.

#### 3.2.1.17 Web View

The Web View is an object representation of an entry in the XML file.

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### 3.2.1.18 Web Views

Web Views is the object responsible for parsing the XML configuration file and creating the appropriate Web View objects. This object also maintains a pool of Web View objects; therefore the XML file does not need to be re-parsed for each request.

### 3.2.1.19 XML Configuration File

This file contains properties for all page requests. Information specified in the file for each page includes: possible navigation destinations, page field elements, the Enter Action, and the Exit Action.

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### 3.2.2 User Request Processing

The following sections describe the lifecycle of a typical user request on the ECARS 2.0 Web Application.

#### 3.2.2.1 Control Processing

As illustrated in Figure 4 below, the MainServlet serves as the main entry point into the ECARS 2.0 Web Application. When the MainServlet receives a user request, it first retrieves an instance of the WebViews object. It then retrieves the WebView object corresponding to the user request. If this is the first request into the application, the WebViews object will parse the application's XML configuration file to generate a pool of WebView objects.

Once the MainServlet has retrieved the WebView object, it will get a list of Form Fields from the WebView. These Form Fields represent fields on the web page and map directly to attributes in the web page's corresponding Form Object. The MainServlet uses the list of Form Fields to get data out of the HttpServletRequest and set it in the appropriate Form. While doing so, the MainServlet may use Form Field Validators to validate that the data is the correct type (e.g. numeric data for a numeric field).

After the data is processed from the request and placed into a Form object, the MainServlet retrieves the Action that corresponds to the page that the user is exiting. The MainServlet then delegates to the Action for any application processing that may be required when the user leaves the page. For example, if a user chooses to save some data, this logic would mostly likely be encapsulated into the exit processing for the save page (details of the page exit processing is described in Section 3.2.2.2).

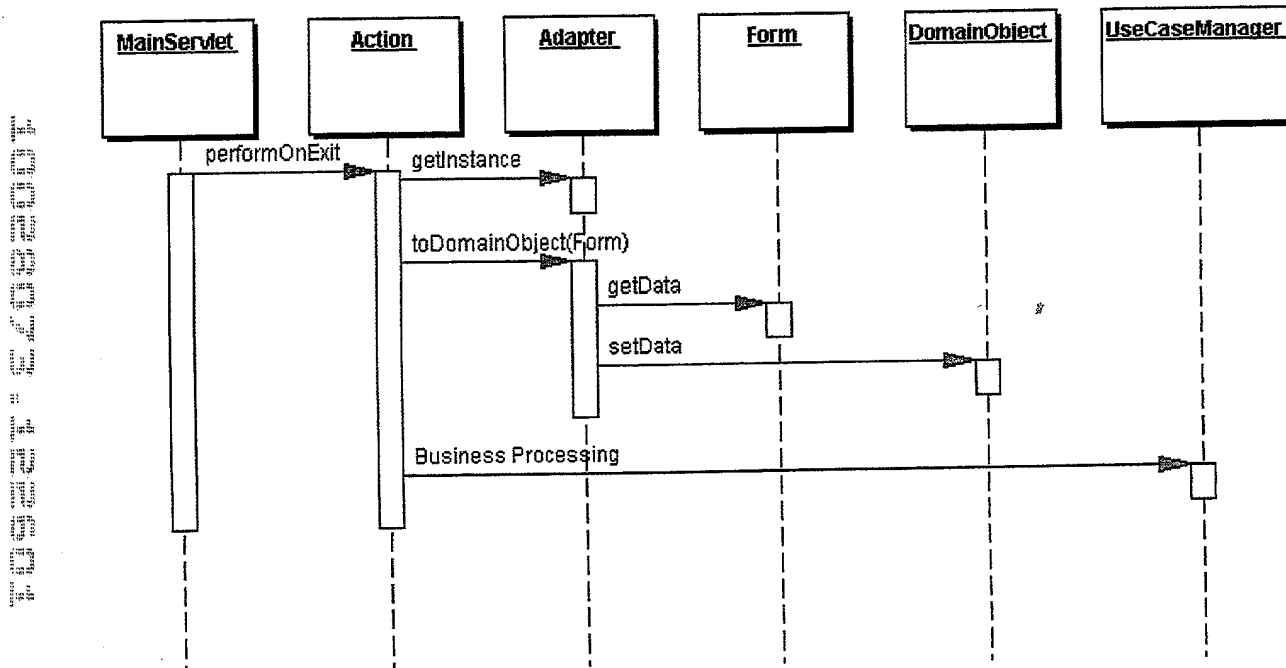
If the page exit processing was not successful, the MainServlet will process the error using the application's exception handling components. Otherwise, the MainServlet will retrieve the Action corresponding to the page that the user would like to navigate to. Similar to the page exit processing, The MainServlet will delegate to the Action for all processing that is required prior to displaying the page. For example, the retrieval of data for display to a user could be encapsulated into the page enter processing (details of the page exit processing is described in Section 3.2.2.3). Then, to display the page, the MainServlet forwards or redirects the request to the corresponding JSP.



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### 3.2.2.2 Page Exit Processing

As mentioned above, the page exit processing is responsible for the application logic when a user exits a page in the application. Usually this entails operating on some data that the user has entered or modified on the screen. In earlier functionality, the MainServlet has processed this user data and put it into a Form object. Since this object represents screen data and not business objects, the data can be difficult to process and validate. Therefore, the Action utilizes an Adapter to take the data from a Form and places it in a Domain object. The Action can then begin to process the data or pass it to the UseCaseManager for detailed business processing or for data storage/retrieval. (This process will be described in more detail in section 3.2.2.4)



**Figure 5 - ECARS 2.0 Web Application Page Exit Processing**

### 3.2.2.3 Page Enter Processing

The page enter processing is typically used to initialize content for pages and to retrieve data for display. To achieve this, the Action delegates to the UseCaseManager to retrieve required data in the form of one or more Domain Objects. The Action then uses an Adapter to transform the data into a Form for display by the JSP.

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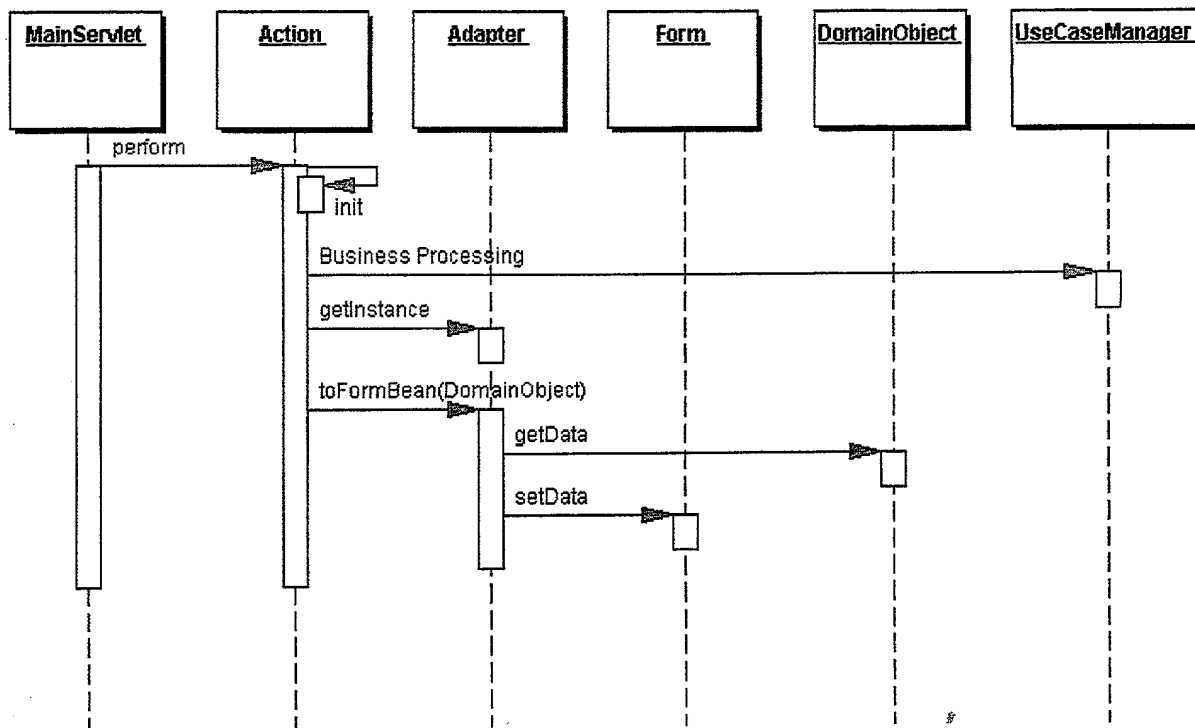


Figure 6 - ECARS 2.0 Web Application Page Enter Processing

#### 3.2.2.4 Business Processing

The business processing is responsible for performing business validations, executing defined business processes, and managing transactions with the data sources. The process begins when the UseCaseManagerBean receives a request from a UseCaseManager or an external system. Any data passed UseCaseManagerBean is validated using a Validator object.

If valid and the business process requires saving data, the UseCaseManagerBean delegates to a DB Factory and passes the Domain Object. The DB Factory processes the Domain Object and transforms the data into a Model or set of Model classes. Additionally, if required, the DB Factory may delegate some processing to an additional DB Factory. Once data has been placed in a Model, it is passed to a DB object to execute the SQL or corresponding data access method.

Similarly, if the business processing requires retrieval of data the DB Factory delegates to the DB for data access. The DB object places the result set into one or more Model objects. The DB Factory then maps the Model data into one or more Domain Objects and passed back to the requestor.



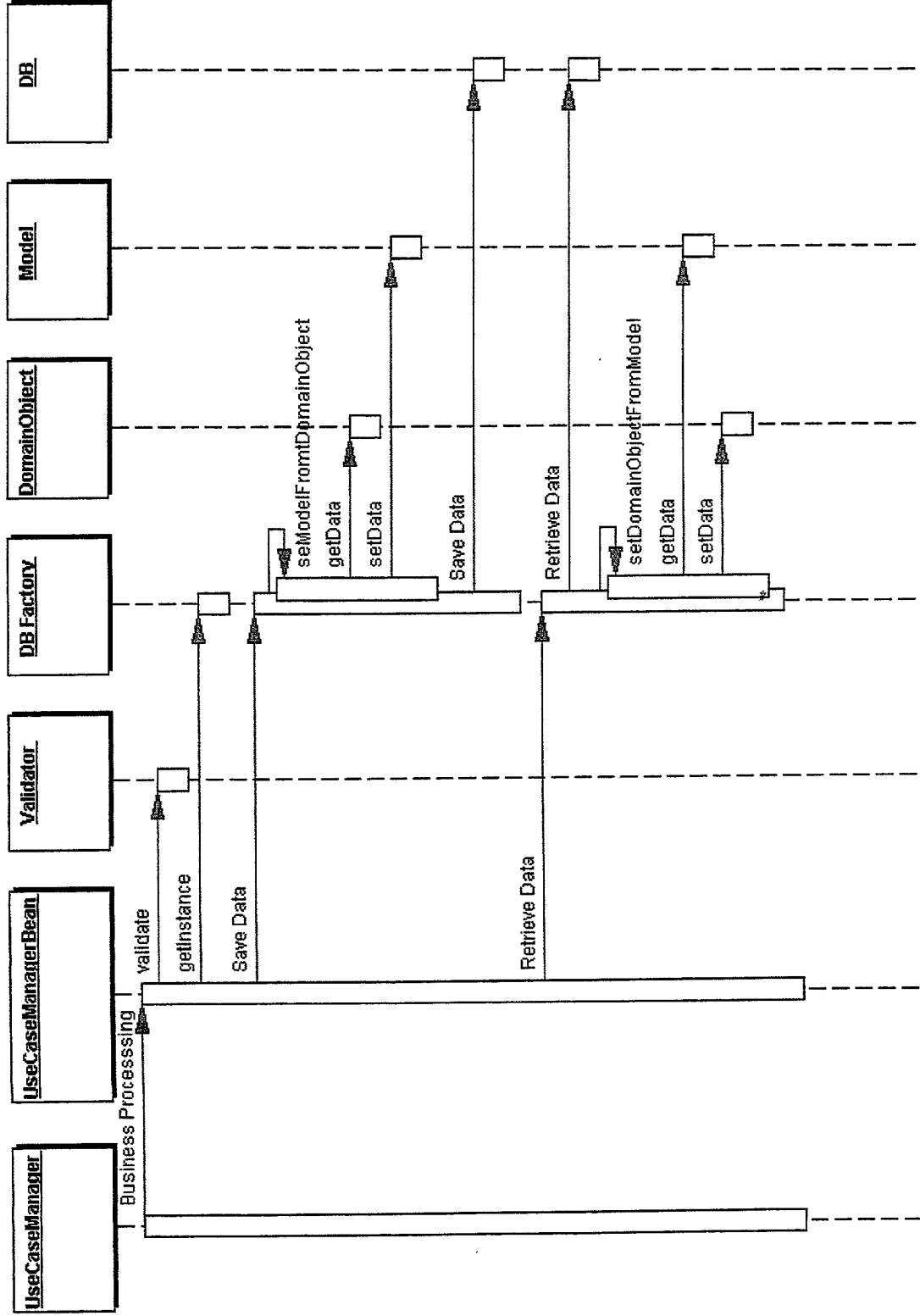


Figure 7 - ECARS 2.0 Web Application Server Processing

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### 3.3 AS/400

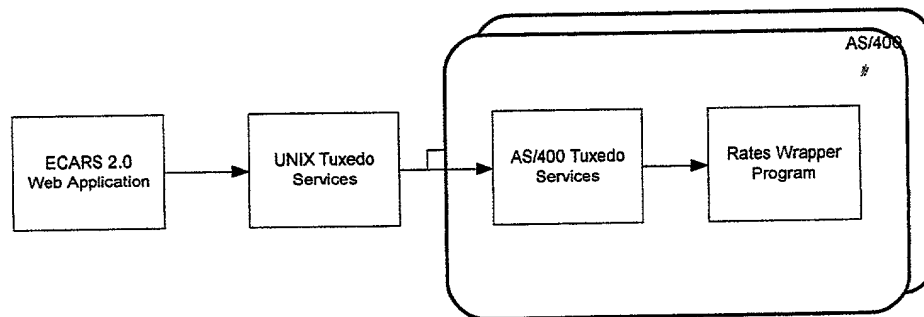
The existing ECARS application runs on seventeen AS/400s. The functionality is distributed by user base such that one AS/400 serves the Midwest, one serves the North East, etc.

### 3.4 AS/400 Interface Programs

#### 3.4.1 ECARS 1.0 Rates Interface

The ECARS 1.0 Rates Interface is a temporary interface required to support the initial Reservation pilot functionality. Eventually the Rates Pricing Engine will replace this interface. The current interface consists of UNIX Tuxedo services, AS/400 Tuxedo services, and AS/400 Wrapper programs. To make this architecture fault tolerant and highly available, the UNIX Tuxedo service serves as a Domain Gateway to the AS/400 Tuxedo services. This configuration allows the architecture to take advantage of Tuxedo's Domain to Domain communication model rather than having to build the failover into the ECARS 2.0 Web Application.

A typical transaction for the ECARS 1.0 Rates Interface would begin with the ECARS 2.0 Web Application making a request to a UNIX Tuxedo service through Jolt<sup>1</sup>.



**Figure 8 - ECARS 1.0 Rates Interface**

<sup>1</sup> The current architecture is designed to use Jolt for all Java to Tuxedo requests. While this architecture works, it introduces complexity due to the required addition of UNIX Tuxedo. To reduce these issues, the WebLogic/Tuxedo Connector (WTC) is currently being evaluated as a potential replacement for Jolt. Using the WTC, WebLogic will act as a Tuxedo Domain and will therefore eliminate the need for a separate UNIX Tuxedo domain.

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### 3.4.2 ECARS 2.0 to ECARS 1.0 Synchronization

When data is saved in the ECARS 2.0 application, it often must be synchronized with data on the AS/400. Based on business requirements, this process is implemented asynchronously using a polling technique<sup>2</sup>. The process starts when data is saved in the ECARS 2.0 Web Application. At this point an entry is put into a queue for processing. A Java thread running within the Web Application periodically reads the queue and begins to process the entry. Because the data formats and structures are different on the two systems, the Java process begins by retrieving additional data and performing data transformations. Once complete, the Java thread sends the data to a UNIX Tuxedo service through Jolt. Similar to the ECARS 1.0 Rates Interface, the UNIX Tuxedo serves as a Domain Gateway to on one of seventeen AS/400 Tuxedo Domains. Then, the data is passed by the AS/400 Tuxedo service to a wrapper program on the AS/400. The AS/400 wrapper program performs AS/400 specific validations and the saves the data. A return code is then returned to the Java process to indicate the success or failure of the transaction.

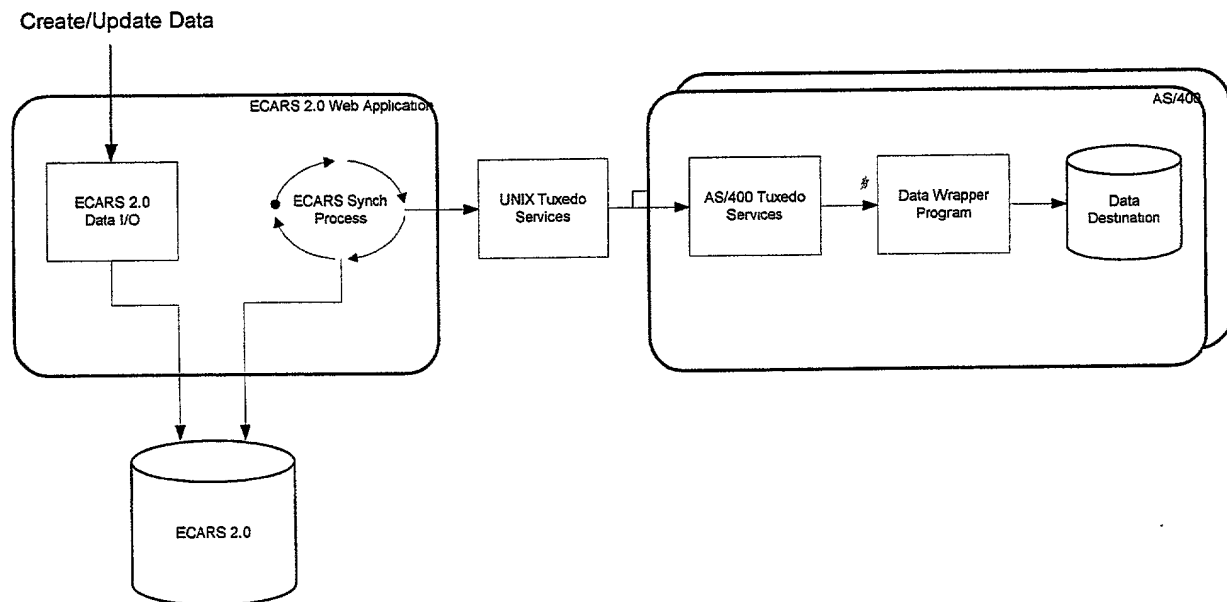


Figure 9 - ECARS 2.0 to ECARS 1.0 Synchronization

### 3.4.3 ECARS 1.0/2.0 Cross Platform Record Locking

The ECARS 1.0 application maintains a lock table to indicate record locks within the AS/400 system. External applications and other ECARS 1.0 processes verify the lock status in the table prior to locking the record. If a lock does not exist, the system enters a record in the table and then obtains a physical lock on the record in the lock file.

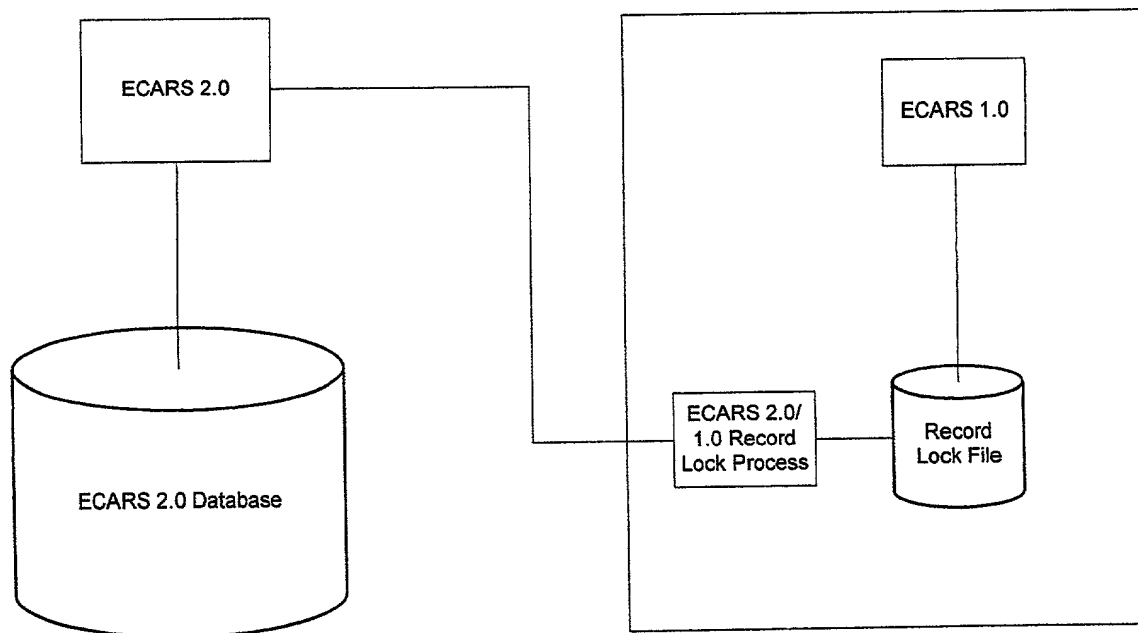
<sup>2</sup> Future implementations may eliminate the polling technique in favor of a JMS based asynchronous solution. This will increase performance by reducing the data retrieval requirements and by reducing the network traffic associated with polling. The JMS based solution, however, would continue to utilize the Tuxedo based architecture.

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In contrast, the ECARS 2.0 system uses time based logical locks on all transaction based data. This strategy has been implemented by adding a timestamp and user ID to the database record to indicate when and by whom a lock has been acquired. Currently, the system allows a user to hold a lock for up to thirty minutes, however this is configurable to adjust the default lock time.

Since the ECARS 1.0 and ECARS 2.0 systems will be active at the same time, there is a requirement to support cross platform record locking. Furthermore, due to the diverse AS/400 programs that use the lock file, it is desired to minimize the impact on the existing programs. Therefore, to accomplish this requirement, the ECARS 1.0 record lock file will serve as the master record lock for cross platform locks.

For a given transaction within the ECARS 2.0 system, the application would first inspect the logical lock within the ECARS 2.0 database. If the application were able to acquire the lock, it would then attempt to acquire the AS/400 lock via the ECARS 2.0/1.0 record lock process. The ECARS 2.0/1.0 record lock process would inspect the lock file to see if the transaction was locked. If not, the process would enter a record in the lock table and then acquire a physical lock. The process acquiring the lock would be configured to expire based on the same logical lock time established for the ECARS 2.0 system.



**Figure 10 - ECARS 1.0/2.0 Cross Platform Record Locking**

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### 3.5 ECARS 1.0 to ECARS 2.0 Synchronization

The ECARS 1.0 reservation data is processed thru Wrapper program(s) on the AS/400. This information is then passed to a transformation file, which contains the cross-reference data for the ECARS 2.0 and ECARS 1.0 reservation number mapping etc. There are individual triggers that map one to one with e\*Gate scripts. These E\*Gate scripts use the cross-reference file(s) for writing to the e\*Gate input transaction file IX001P. The rules specific transformation scripts will then write the data to the ECARS2.0 Oracle Data base.

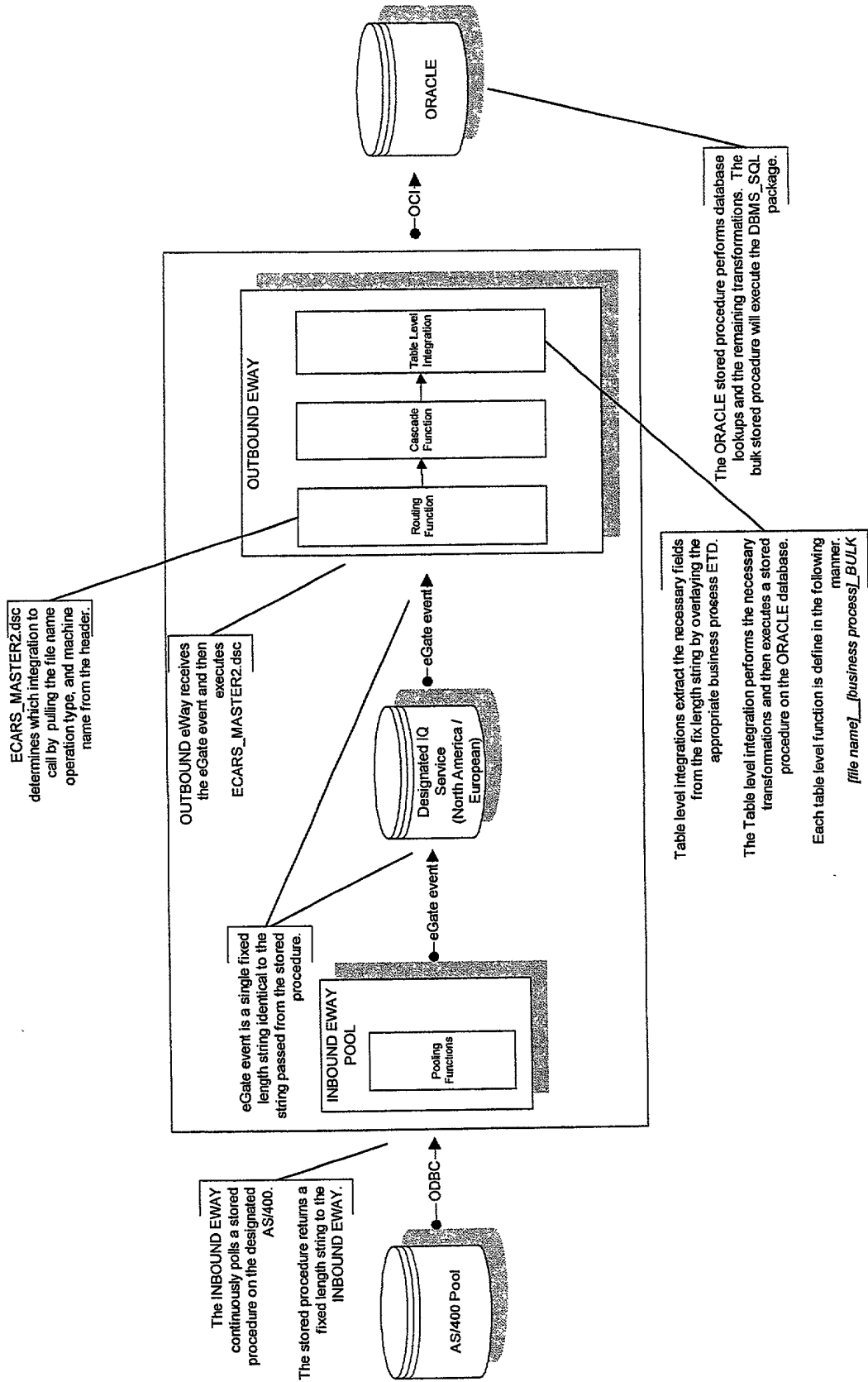


Figure 11 - ECARS 1.0 to ECARS 2.0 Synchronization

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### 3.5.1 AS/400 Stored Procedures

The AS/400 stored procedures are used to poll unprocessed data from an AS/400 transaction file.

### 3.5.2 Polling Scripts

The polling scripts are used to facilitate the execution of the AS/400 stored procedures. The data being pulled from the North American machines varies only in the size of the last fixed length field from the European machines.

### 3.5.3 Routing Script

The Routing Script is used to direct incoming files from the IQ to the correct cascade. The Routing Script first loops through each record and matches the current record to the previous records.

### 3.5.4 Cascades and Table Level Integrations

The lower two levels of the three-tier dart script architecture consists of the cascade scripts and the table level integration scripts.

### 3.5.5 Cascade

The cascade scripts basically execute each of the BULK Table Level Integrations scripts in the correct sequence. Depending on the data sorted from the Routing Script the cascade will receive the records contained in a single fixed length string. All data received will be from the same file, for the same operation, and be for North America or European. The Routing Script executes the cascades file.

### 3.5.6 Table Level Integrations

At this level, required and relevant data are mapped. There are 2 basic types of table level integration scripts: Bulk and Line mode. Bulk scripts are the primary method for data integration. Bulk scripts using the DBMS\_SQL package attempts to insert or updates up to 750 records at one time. Bulk script will not return an error, because in the event of an error the Bulk script will execute the equivalent Line script. The Line scripts are the secondary method for data integration. Line scripts attempt to update or insert a single record at a time. In the event of an error, the script will send an event to the e\*Gate monitor for each record that contained an error.

### 3.5.7 Monk Dart Scripts

There are four types of monk scripts used in this project architecture Routing, Cascade, Table Level Integrations, and Poll scripts. Most DART scripts are categorized as either Bulk or Line Table Level Integrations. Each type of script follows a common flow of logic and the only difference from script to script in a particular category is the transformation of data.

### 3.5.8 Oracle Stored Procedures

Both Bulk and Line mode dart scripts utilize Oracle PL/SQL procedures. Every monk DART script declares a specific stored procedure and assigns it to a connection handle variable. Bulk mode dart scripts call Bulk mode stored procedures, and Line mode DART scripts declare Line mode stored procedures. DART scripts then map required and relevant data to the outbound data structure (ETD). The data collected by the outbound data structures are then assigned to unique parameters in the stored procedures.

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Each line mode within the Oracle PL/SQL stored procedure implements 1 parameter, which consists of a single row of data. Each data segment is processed individually, then the stored procedures exit after performing an insert or an update operation.

### 3.6 ECARS 2.0 Database

The ECARS 2.0 Database is an Oracle 8i database with multiple schemas within the instance. Currently, the schemas include ones for transaction, transaction reference, geographic, Group/Branch, vehicle, and rates pricing engine data.

### 3.7 Rates Pricing Engine

The Rates Pricing Engine is responsible for determining rental rates for given input parameters. The functionality has been written using Pro\*C with the ECARS 2.0 database. The Rates Pricing Engine functionality will be accessed by the ECARS application using UNIX based Tuxedo services.



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## Appendix A – Further Reading

### Web Application

#### Exception Handling

\\FSCORP00\corp\_public\APPS\Ecars\_20\Program Artifacts\Architecture Program Artifacts\Design Guidelines\Exception Handling.doc

#### Logging

\\FSCORP00\corp\_public\APPS\Ecars\_20\Program Artifacts\Architecture Program Artifacts\Design Guidelines\Logging Guidelines.doc

#### Internationalization

\\FSCORP00\corp\_public\APPS\Ecars\_20\Program Artifacts\Architecture Program Artifacts\Design Guidelines\Internationalization Guidelines.doc

#### eLocation

\\FSCORP00\corp\_public\APPS\Ecars\_20\Development Projects\Reservation Primary Use Cases\Artifacts\OO Modeling\Elocale\ELocationPOC.doc

\\FSCORP00\corp\_public\APPS\Ecars\_20\Development Projects\Reservation Primary Use Cases\Artifacts\OO Modeling\Elocale\ELocation Overview.doc

#### Printing

\\FSCORP00\corp\_public\APPS\Ecars\_20\Development Projects\Reservation Primary Use Cases\Artifacts\OO Modeling\Print\Print Overview.doc

#### Application Locking

\\FSCORP00\corp\_public\APPS\Ecars\_20\Development Projects\Application Navigation and Security\Artifacts\OO Modeling\Service Catalog - Application Locking.doc

#### ECARS 2.0 to ECARS 1.0 Synchronization

\\FSCORP00\corp\_public\APPS\Ecars\_20\Program Artifacts\Architecture Program Artifacts\Application Interface Processes\Reservation Rental GUI to Legacy Support.doc

ECARS 2.0 Reservation

Edit View Insert Format Tools Table Window Help				
Supplemental Specs				
Edit View Help				
File	Size	Type	Modified	
100 Bill to Screen Spec	627KB	Microsoft Word Document	11/30/01 9:18 AM	
101 Callback Flag Screen Action Spec	127KB	Microsoft Word Document	11/30/01 9:23 AM	
102 Contact Synch Document	130KB	Microsoft Word Document	11/30/01 9:24 AM	
103 Daily Reservation Detail Screen Spec	142KB	Microsoft Word Document	11/30/01 9:25 AM	
104 Daily Reservation Summary Spec	119KB	Microsoft Word Document	11/30/01 9:26 AM	
105 Edit and Void Specs and Reqs	253KB	Microsoft Word Document	11/30/01 9:27 AM	
106 Error Messages- NA, UK and DE	137KB	Microsoft Word Document	11/30/01 9:27 AM	
107 Hot Keys Screen Spec	593KB	Microsoft Word Document	11/30/01 9:22 AM	
108 Navigation and Screen Layout	179KB	Microsoft Word Document	11/30/01 9:29 AM	
109 Res Additional Drivers Screen Spec	198KB	Microsoft Word Document	11/30/01 9:30 AM	
110 Res GEO Framework Screen Spec	74KB	Microsoft Word Document	11/30/01 9:33 AM	
111 Res Other Address Screen Spec	91KB	Microsoft Word Document	11/30/01 9:35 AM	
112 Reservation Dates and Rates Screen Spec	498KB	Microsoft Word Document	11/30/01 9:36 AM	
113 Reservation Driver Search Screen Spec	207KB	Microsoft Word Document	11/30/01 9:38 AM	
114 Reservation Forecasting Screen Spec	106KB	Microsoft Word Document	11/30/01 9:42 AM	
115 Reservation Notification	112KB	Microsoft Word Document	11/30/01 9:44 AM	
116 Reservation Screen Spec Notes	159KB	Microsoft Word Document	11/30/01 9:57 AM	
117 Reservation Screen Spec-Referral Source	348KB	Microsoft Word Document	11/30/01 9:55 AM	
118 Screen Action Spec Renter Vehicle Shop	460KB	Microsoft Word Document	11/30/01 9:59 AM	
119 Screen Action Specification-Reservation P...	456KB	Microsoft Word Document	11/30/01 10:01 AM	
120 Screen Spec Reservation Search	216KB	Microsoft Word Document	11/30/01 10:02 AM	
121 ScreenActionSupSpec-Insurance Detail	134KB	Microsoft Word Document	11/30/01 10:06 AM	
122 ScreenSpec-Cash Qualification	231KB	Microsoft Word Document	11/30/01 10:08 AM	
123 Supplemental Spec Reservation Driver	98KB	Microsoft Word Document	11/30/01 10:09 AM	
124 System Generated Notes	88KB	Microsoft Word Document	11/30/01 10:14 AM	
125 Transfer Reservation Screen Action Spec	195KB	Microsoft Word Document	11/30/01 10:16 AM	

126 Architecture

File(s) selected 628KB

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111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200

## Revision History

Date	Version	Description	Author
04/12/2001	0.0	Created Template	Marty Tichy
08/06/2001	1.0	Created Document	Maribeth Concannon
08/30/2001	1.1	Updated to reflect changes from Navigation use case.	James Atteberry
10/03/2001	1.2	Added screen shot for Account Search -- Reservation Pilot version	James Atteberry
10/08/2001	1.3	Replaced Account Search screen shots with the versions that do not have print buttons.	Chris Carr

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Reservation\Supplemental Specs\Bill-To Screen Spec.DOC

## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Bill to screen used in Reservation and Open.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Screen Prints

#### 2.1 Main Screen

**Bill-To - Microsoft Internet Explorer provided by Enterprise Rent-a-Car**

File Edit View Favorites Tools Help

Reservation Contracts Callbacks

**DRIVERS**  
James Atteberry  
Additional Drivers: 2

**REFERRAL**  
Account Name  
Contact Name

**DATES/RATES**  
08/27/2001; ECAR  
Daily Rate; ASD

**BILL-TO**  
Account Name  
Contact Name

**VEHICLE/SHOP**  
1997 Dodge Avenger ES  
Shop Account Name

**NOTES**  
Notes Taken: 1  
Changed: 08/27/2001

**Bill-To** - Options - Go X

Account Name Account Number Search Not on File  
Contact Name Phone Number  
New Contact

**Vehicle Authorization**  
Start Date Start Time End Date End Time No. of Days  
MM/DD/YYYY MM/DD/YYYY  
Daily Amount Tier Tax Authorized By  
Rate List PLUS TAX -Select- New Contact  
Legacy Auth. Amount: \$26/DAY-\$800MAX

Status Claim Type Insured Name Claim/Pol/PO/RO  
PENDING INSURED

**Maximum Information**  
Max Per Day Total Max Amount Max # Days Last Day  
MM/DD/YYYY

**Other Authorizations**

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

Figure 1 - Bill-To main screen

## 2.2 Account Search

Account Search - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help Address

Reservation Contracts Callbacks

### Account Search

Group:

Account Name  Account Phone Number  Account Type

Account Name	Account Number	Account Type	Domestic GP/BR	Account Address	City	State	Zip	Phone Numbers
A Collector's Bookstore**	GE1658	Corporate	0101	6275 Delmar	St. Louis	MO	63130	(314) 721-6127
A.f.i. Remodeling Co**	GE1225	Corporate	0102	312 Oak Pk. Village Dr.	Wildwood	MO	63040	636 458-1552
Accent Lincoln-mercury**	129498	Dealership	0103	9700 Manchester Rd	St. Louis	MO	63119	(314) 968-5300
Advantage Decorating**	GE0853	Corporate	0104	1601 North 7th St.	St. Louis	MO	63102	(314) 436-1419
African Amer. Rite Of Passage**	GE1538	Corporate	0105	325 Debaliviere	St. Louis	MO	63112	314 3612268
Ahzad Bogosian**	GE0830	Corporate	0106	7743 Arthur	St. Louis	MO	63117	(314) 645-3076
Aiq-cs**	GE0238	Corporate	0107	120 S Central, Ste 300	St. Louis	MO	63105	(000) 000-0000
Al-pac, Inc.**	GE1350	Corporate	0108	18535 Old Hwy 66	Pacific	MO	63069	(636)271-8222
Albertin Auto Body Inc**	G08868	Bodyshop	0109	8449 Page	St. Louis	MO	63130	(314) 423-

Items 1 - 66 of 66 found [Prev](#) [1](#) [2](#) [3](#) [4](#) [5](#) [Next](#)

Res - 411781 Tkt - 234567 Cbk - 363221

Done Local intranet

Figure 2 - Account Search (Open Ticket version)

Account Search - Microsoft Internet Explorer provided by Enterprise Rent-A-Car

File Edit View Favorites Tools Help Address

Reservation Contracts Callbacks

### Account Search

Group:  
01 - St Louis

Account Name Account Phone Number Account Type  
All

Search Reset Back

Account Name	Account Number	Account Type	Owning GP/BR	Account Address	City	State	Zip	Phone Numbers
A Collector's Bookstore**	GE1658	Corporate	0101	6275 Delmar	St. Louis	MO	63130	(314) 721-6127
A.f.f. Remodeling Co**	GE1225	Corporate	0102	312 Oak Pk. Village Dr.	Wildwood	MO	63040	636 458-1552
Accent Lincoln-mercury**	129498	Dealership	0103	9700 Manchester Rd	St Louis	MO	63119	(314) 968-5300
Advantage Decorating**	GE0853	Corporate	0104	1601 North 7th St.	St. Louis	MO	63102	(314) 436-1419
African Amer. Rite Of Passage**	GE1538	Corporate	0105	325 Debaliviere	St. Louis	MO	63112	314 3612268
Ahsad Bogosian**	GE0830	Corporate	0106	7743 Arthur	St. Louis	MO	63117	(314) 645-3076
Aig-cs**	GE0238	Corporate	0107	120 S Central, Ste 300	St Louis	MO	63105	(000) 000-0000
Al-pac, Inc.**	GE1350	Corporate	0108	18535 Old Hwy 66	Pacific	MO	63069	(636)271-8222
Albertin Auto Body Inc**	G08868	Bodyshop	0109	8449 Page	St Louis	MO	63130	(314) 423-

Items 1 - 66 of 66 found Prev 1 2 3 4 5 Next

Res - 411781 Tkt - 234567 Cbk - 363221

Done Local intranet

Figure 3 - Account Search (Res Pilot version)

2.3 Not on File

**Not on File**

Name:

Address:

Zip:  Phone:

City:  State:

Contact Last Name:

Contact First Name:

2.4 Add Contact

**Add Contact**

Last Name:

First Name:

## 2.5 Rates Table

Rates Table								
Car Class	Daily		Weekly		Monthly		Hourly	Mileage
	Rate	Mileage	Rate	Mileage	Rate	Mileage	Rate	Charge
CCAR	9.99	250	29.99	500	99.99	2500	2.99	0.25
ECAR	15.99	250	34.99	500	109.99	2500	3.99	0.25
FCAR	20.99	250	39.99	500	209.99	2500	4.99	0.25
SCAR	25.99	250	44.99	500	249.99	2500	5.99	0.25
Cancel								

## 3. Reservation Number

### 3.1 SUPLpending1.pending2 Behavior

This area shows the unique reservation number that has been assigned to the newly created reservation. The reservation number is 6 alphanumeric characters long. If another reservation is open, its reservation will be displayed in this area as well. The user will have the ability to have up to 3 reservations open at a time. A hyperlink will be available on the reservation numbers of the reservations that are NOT currently being displayed. For the reservation that is currently displayed, the reservation number will not have a hyperlink available. This is to allow the user to navigate between the open reservations.

### 3.2 Validation

None identified at this time.

### 3.3 SUPLpending1.pending5 Business Exceptions

If the user tries to open a 4th reservation, the system will display a message. See error message supplemental spec for exact text.

### 3.4 System Exceptions

None identified at this time.

## 4. Bill-to Title Bar Area

### 4.1 Behavior

The option area in the bill-to Title Bar will allow the user to access transaction-wide functions. These functions for Reservation are: -- Options --, Print, Void and Transfer. The default option is "--Options --". The user must press the Go button to initiate the selected function.

The Title bar Button area contains two buttons -- a Go button and a Close button.

The Go button is always active, and is used to initiate a function selected in the Options area. If the selected option is "--Options --" (the default), nothing should happen.

The Close button is always active and is used to close the current transaction. The button is labeled with an 'X'. Pressing this button will cause a confirmation popup to appear, asking the user if they wish to cancel the transaction and lose all changes. If the user selects 'No', they are returned to the Bill-to screen. If the user selects 'Yes', the transaction is closed with no changes saved to the database.



#### **4.2 Validation**

None identified at this time.

#### **4.3 Business Exceptions**

None identified at this time.

#### **4.4 System Exceptions**

None identified at this time.

### **5. Button Line Area**

#### **5.1 Behavior**

The Previous button will take the user to the Dates/Rates screen within the same transaction.

The Next button will take the user to the Vehicle/Shop screen within the same transaction.

The Complete button will initiate a save of the transaction. All validations will be performed, returning any errors to the user. If there are no errors, the transaction is saved, and the user is returned to the Reservation home page.

#### **5.2 Validation**

None identified at this time.

#### **5.3 Business Exceptions**

None identified at this time.

#### **5.4 System Exceptions**

None identified at this time.

### **6. Bill-to**

#### **6.1 Account Name**

This is a drop down which displays the "branch short list" of Account Names when the user hits the button beside it. Or, if the user begins to type anything in the field, a drop down will automatically appear and continue to position to the name most closely matching what has been typed.

Drop down. If the user selects an account not authorized to bill ("Source only") then the system presents message and user can make another selection or clear the field and use "Not on File."

##### **6.1.1 Business Exceptions**

None.

##### **6.1.2 System Exceptions**

None.

#### **6.2 Account Number**

If the user has selected a name from the drop-down, the corresponding number should appear here.

Alternatively, the user can enter an Account number in this field.

Validation of the value in the field is performed when the user selects the "Search" button.

If the number isn't a valid account, then the system provides a message. If it is valid, but not billable, then the user can make another selection or clear the field and use "Not on File."

**6.2.1 Business Exceptions**

None.

**6.2.2 System Exceptions**

None.

**6.3 "Search" button**

If this button is used when an account number is in the "Account Number" field, then it validates the account number.

If not account number is present, then the "Account Search" screen is displayed.

In the first scenario above, if the account is not valid, a message is displayed. (See Referral Source for up-to-date functionality.)

**6.3.1 Business Exceptions**

None.

**6.3.2 System Exceptions**

None.

**6.4 "Not on File" Button**

Takes the user a screen to add a bill-to. This should also blank out the Account name and the Account number.

Upon returning from the panel, the name should be in the Account Name field and the Account Number should be blank.

**6.4.1 Validation**

None.

**6.4.2 Business Exceptions**

None.

**6.4.3 System Exceptions**

None.

**6.5 Contact Name**

This is a drop-down based on the account name selected above.

If not account name is selected, then the drop-down should be blank.

**6.5.1 Business Exceptions**

None.

**6.5.2 System Exceptions**

None.

## 6.6 "New Contact" Button

This allows the user to add a contact to an account in the event that the name they're looking for is not present in the drop-down.

This pulls up a panel for the user to enter the first and or last name.

### 6.6.1 Validation

None.

### 6.6.2 Business Exceptions

None.

### 6.6.3 System Exceptions

None.

## 6.7 Phone Number

The user may add or update a number for the contact selected. This number is only saved on the contract.

Standard phone number formatting.

### 6.7.1 Business Exceptions

None.

### 6.7.2 System Exceptions

None.

## 6.8 Overall behavior

Once an account is selected (either by drop-down or by entering the number manually, the "Bill-to X" hyperlink is changed to the name of the account.

As a bill-to is added, the next "Bill-to X" is added to the list across the top, so as to allow the user to add another Bill-to. The maximum number of Bill-tos is four. *This functionality will not be available for Reservation Pilot since only one bill-to is allowed.*

## 7. Vehicle Authorization

### 7.1.1 Behavior

The start date should default to the open date and time of the ticket (either real for an open ticket, or projected, in the case of a reservation).

### 7.1.2 Validation

Standard date formatting.

Must be a date within the range of pickup date and return date.

Requires a status of "Authorized"

### 7.1.3 Business Exceptions

None.

### 7.1.4 System Exceptions

None.

## **7.2 Start Date Button**

### **7.2.1 Behavior**

Displays calendar for date selection

### **7.2.2 Validation**

Standard date calendar.

### **7.2.3 Business Exceptions**

None.

### **7.2.4 System Exceptions**

None.

## **7.3 Start Time**

### **7.3.1 Behavior**

If the ticket or reservation is 24 billing cycle, then the value defaults to the p/up time (if available) If no pickup time is available, the default value is 'blank'.

### **7.3.2 Validation**

This field is only valid for 24 hour billing. If the ticket is calendar day billing, the drop down should not work. If 24h billing, then the values are 15 minute increments around the clock. #

### **7.3.3 Business Exceptions**

None.

### **7.3.4 System Exceptions**

None.

## **7.4 End Date**

### **7.4.1 Behavior**

The end date should default blank .

### **7.4.2 Validation**

Standard date formatting.

Must be a date which is equal to or after the Start Date.

Requires a status of "Authorized"

### **7.4.3 Business Exceptions**

None.

### **7.4.4 System Exceptions**

None.

## **7.5 End Date Button**

### **7.5.1 Behavior**

Displays calendar for date selection

**7.5.2 Validation**

Standard date calendar .

**7.5.3 Business Exceptions**

None.

**7.5.4 System Exceptions**

None.

**7.6 End Time**

**7.6.1 Behavior**

If the ticket or reservation is 24 billing cycle, then the value defaults to the same value as the start time

**7.6.2 Validation**

This field is only valid for 24 hour billing. If the ticket is calendar day billing, the drop down should not work. If 24h billing, then the values are 15 minute increments around the clock.

**7.6.3 Business Exceptions**

None.

**7.6.4 System Exceptions**

None.

**7.7 No. of Days**

**7.7.1 Behavior**

If the start date and end date are completed, this should be filled with the number of days authorized.

**7.7.2 Validation**

Valid values are 0 and any integer.

If the user skips end date, the system will determine the date using this value in association with the start date.

**7.7.3 Business Exceptions**

None.

**7.7.4 System Exceptions**

None.

**7.8 Daily Amount vs. Total Charges Toggle**

**7.8.1 Behavior**

User selects one or the other.

If total charges, then leave daily amount field and tax field blank.

If the user elects to add information in to the daily amount field or the tax field and the "Total Charges" are selected, the system should change the toggle to the Daily Amount.

### 7.8.2 Validation

If daily (along with authorized status = "authorized"), then authorized amount, tax and authorized by are required.

If total charges (along with authorized status = "authorized"), then authorized by is required.

\*\*\*\*\*NOTE 4.8 will not be for Reservation Pilot. The users will not have the ability to choose total charges.

### 7.8.3 Business Exceptions

None.

### 7.8.4 System Exceptions

None.

## 7.9 Daily Amount Field

### 7.9.1 Behavior

If this field is changed by the user, the system should ensure that the toggle for "Daily Authorization" is selected.

This field can be filled in by the user, or by the "Rate List Button"

### 7.9.2 Validation

Alpha numeric

### 7.9.3 Business Exceptions

None.

### 7.9.4 System Exceptions

None.

## 7.10 Rate List Button

### 7.10.1 Behavior

Takes the user to a screen to pick a car class from the "Rates Table". The car class and all associated rates for the ticket are saved in the ticket, although it doesn't show on the screen. If the rate that is retrieved is tiered, then the rate from the first tier is put in the daily amount field and the tier flag is checked.

### 7.10.2 Validation

If the bill-to does not have negotiated rates in the system, this button will return nothing.

### 7.10.3 Business Exceptions

None.

### 7.10.4 System Exceptions

None.

## 7.11 Tier Flag

### 7.11.1 Behavior

System updated based on the criteria listed in the Rate List Button behavior.

**7.11.2 Validation**

None.

**7.11.3 Business Exceptions**

None.

**7.11.4 System Exceptions**

None.

**7.12 Tax**

**7.12.1 Behavior**

Drop down to indicate either "included" or "plus tax". Should default to "included."

**7.12.2 Validation**

This field is required with a daily authorization when the status is "authorized."

**7.12.3 Business Exceptions**

None.

**7.12.4 System Exceptions**

None.

**7.13 Authorized By**

**7.13.1 Behavior**

Drop down of all of the contacts for the bill-to. See Contact name.

**7.13.2 Validation**

Authorized by is required when the authorization status is "Authorized"

**7.13.3 Business Exceptions**

None.

**7.13.4 System Exceptions**

None.

**7.14 "New Contact" Contact Button**

See New Contact from Bill-to.

**7.15 Output field for Green Screen ECARS Max Amount Field**

**7.15.1 Behavior**

This is an output field that displays the information from the Max Amount Field in the Reservation / Open Ticket.

It cannot be updated by the user.

Anytime the contract is saved, this field is updated with the values from the Daily Amount concatenated with the Total Max Amount and saved to legacy that way. If both of those fields are blank, then no update is made.

**7.15.2 Validation**

None

**7.15.3 Business Exceptions**

None

**7.15.4 System Exceptions**

None

**7.16 Status**

**7.16.1 Behavior**

The default value is 'blank'.

The user can select one of the following: Authorized, Pending, Declined, Terminated, and Reimbursement.

**7.16.2 Validation**

If the user selects Authorized, then some fields in the authorization information box are required. See those fields for those notes.

**7.16.3 Business Exceptions**

None.

**7.16.4 System Exceptions**

None.

**7.17 Claim Type**

**7.17.1 Behavior**

Drop-down. The user can select from among "Insured, Claimant, or Theft. (Equivalent values will be determined for each country.)

Default to "blank".

**7.17.2 Validation**

This field is required when the rental type is "Insurance".

**7.17.3 Business Exceptions**

None.

**7.17.4 System Exceptions**

None.

**7.18 Insured Name**

**7.18.1 Behavior**

This is a text field.

**7.18.2 Validation**

Optional.



The bill-to account may require that information be captured in this field (AASI02), but it is only required at the time of close. The account may, however, require that any information in the field be in a particular format. This is to be enforced during Reservation, Open and Close.

**7.18.3 Business Exceptions**

None.

**7.18.4 System Exceptions**

None.

**7.19 Claim/Pol/PO/RO#**

**7.19.1 Behavior**

This is a text field.

**7.19.2 Validation**

Optional.

The bill-to account may require that information be captured in this field (AASI02), but it is only required at the time of close. The account may, however, require that any information in the field be in a particular format. This is to be enforced during Reservation, Open and Close.

**7.19.3 Business Exceptions**

None.

**7.19.4 System Exceptions**

None.

**8. Maximum Information**

**8.1 Overall behavior**

**8.2 Max Per Day**

**8.2.1 Behavior**

This is a numeric field which must support the local currency formatting.

**8.2.2 Validation**

This field is not required.

**8.2.3 Business Exceptions**

None.

**8.2.4 System Exceptions**

None.

**8.3 Total Max Amount**

**8.3.1 Behavior**

This is a numeric field which must support the local currency formatting.

8.3.2 *Validation*

This field is not required.

8.3.3 *Business Exceptions*

None.

8.3.4 *System Exceptions*

None.

**8.4 Max # Days**

8.4.1 *Behavior*

This is a numeric field which must support integers.

8.4.2 *Validation*

This field is not required.

8.4.3 *Business Exceptions*

None.

8.4.4 *System Exceptions*

None.

**8.5 Last Day**

8.5.1 *Behavior*

This is a date field.

8.5.2 *Validation*

This field is not required.

8.5.3 *Business Exceptions*

None.

8.5.4 *System Exceptions*

None.

**8.6 "Last Day" Calendar button**

8.6.1 *Behavior*

Displays calendar for date selection

8.6.2 *Validation*

Standard date calendar.

8.6.3 *Business Exceptions*

None.

8.6.4 *System Exceptions*

None.

## **9. Other Authorizations**

### **9.1 Overall behavior**

This section will be omitted from Reservation Pilot. It will only be incorporated once the Perot system has been integrated.

### **9.2 Item**

#### **9.2.1 Behavior**

Drop-down to select from the products available at the renting branch.

#### **9.2.2 Validation**

None.

#### **9.2.3 Business Exceptions**

None.

#### **9.2.4 System Exceptions**

None.

### **9.3 Start Date**

#### **9.3.1 Behavior**

The first date which is authorized to bill for the item. This should default to the start date in the Authorization Information above.

#### **9.3.2 Validation**

Standard date formatting.

Must be a date within the range of pickup date and return date.

Requires a status of "Authorized"

#### **9.3.3 Business Exceptions**

None.

#### **9.3.4 System Exceptions**

None.

### **9.4 End Date**

#### **9.4.1 Behavior**

The end date should default to the end date of the authorization above. Provided that it is the same, when the end date of the "master authorization" is changed, the end date should change for each item with a matching end date.

#### **9.4.2 Validation**

Standard date formatting.

Must be a date which is equal to or after the Start Date for the item authorized.

Requires a status of "Authorized"

**9.4.3 Business Exceptions**

None.

**9.4.4 System Exceptions**

None.

**9.5 Amount**

**9.5.1 Behavior**

Text field.

**9.5.2 Validation**

None.

**9.5.3 Business Exceptions**

None.

**9.5.4 System Exceptions**

None.

**9.6 Tax**

**9.6.1 Behavior**

Drop down to indicate either "included" or "plus tax". Should default to "included."

**9.6.2 Validation**

Required for each row where an item is selected.

**9.6.3 Business Exceptions**

None.

**9.6.4 System Exceptions**

None.

**10. Account Search Screen**

**10.1 Overall Note**

This screen is called from the Bill-to screen. These notes are intended to highlight to overall functionality, but may not reflect the most up-to-date changes. See the use case and screen spec for Search for the most accurate information.

**10.2 Group**

**10.2.1 Behavior**

This is a drop-down to limit the scope of the search. For Reservation Pilot, this drop down will not be enabled. It will be set to the Physical Terminal's physical location and the user will not be able to change it.

**10.2.2 Validation**

Any group present in the drop down is valid for search.

### 10.2.3 *Business Exceptions*

None.

### 10.2.4 *System Exceptions*

None.

## 10.3 **Account Name**

### 10.3.1 *Behavior*

The information in the text field is used in association with the "Account Phone Number" and "Account Type" to limit the scope of the search.

### 10.3.2 *Validation*

The field is optional.

The field defaults to blank.

### 10.3.3 *Business Exceptions*

None.

### 10.3.4 *System Exceptions*

None.

## 10.4 **Account Phone Number**

### 10.4.1 *Behavior*

The information in the text field is used in association with the "Account Name" and "Account Type" to limit the scope of the search.

### 10.4.2 *Validation*

The field is optional.

The field defaults to blank.

### 10.4.3 *Business Exceptions*

None.

### 10.4.4 *System Exceptions*

None.

## 10.5 **Account Type**

### 10.5.1 *Behavior*

Drop down.

The information is used in association with the "Account Phone Number" and "Account Name" to limit the scope of the search.

### 10.5.2 *Validation*

The field is optional.

The field defaults to "All".

### 10.5.3 *Business Exceptions*

None.

### 10.5.4 *System Exceptions*

None.

## 10.6 **Search Button**

### 10.6.1 *Behavior*

Executes the search using the criteria entered above.

### 10.6.2 *Validation*

None.

### 10.6.3 *Business Exceptions*

None.

### 10.6.4 *System Exceptions*

None.

## 10.7 **Reset Button**

### 10.7.1 *Behavior*

Clears the screen of the previous search (if applicable) and clears the "Account Name", "Account Phone Number", and "Account Type" fields.

### 10.7.2 *Validation*

None.

### 10.7.3 *Business Exceptions*

None.

### 10.7.4 *System Exceptions*

None.

## 10.8 **Cancel Button**

### 10.8.1 *Behavior*

Returns to the screen from which the search was called. No account name or number is returned.

### 10.8.2 *Validation*

None.

### 10.8.3 *Business Exceptions*

None.

### 10.8.4 *System Exceptions*

None.

## **10.9 Print Current Page**

### **10.9.1 Behavior**

Prints the list of accounts found and shown on the screen.

### **10.9.2 Validation**

None.

### **10.9.3 Business Exceptions**

None.

### **10.9.4 System Exceptions**

None.

## **10.10 Print Current Page**

### **10.10.1 Behavior**

Prints the list of all accounts found that match the given criteria.

### **10.10.2 Validation**

None.

### **10.10.3 Business Exceptions**

None.

### **10.10.4 System Exceptions**

None.

## **10.11 Page Numbers (Hyperlinks)**

### **10.11.1 Behavior**

Positions the list to the page selected, or to the "Previous" or "Next" page, if selected.

### **10.11.2 Validation**

These should not be hyperlinks, if no more than one page of Accounts were returned. (i.e. If only one page of accounts is displayed, then the "Prev", "Next" will display on either side of the number "1", and none of them will be hyperlinks.)

### **10.11.3 Business Exceptions**

None.

### **10.11.4 System Exceptions**

None.

## **11. Not on File**

### **11.1 Note**

International considerations have not yet been made.

## **11.2 Name**

### **11.2.1 Behavior**

Text field to enter the name of the company.

### **11.2.2 Validation**

This field is required.

### **11.2.3 Business Exceptions**

None.

### **11.2.4 System Exceptions**

None.

## **11.3 Address**

### **11.3.1 Behavior**

Text field to enter the company's address.

### **11.3.2 Validation**

All address formatting rules apply. This field is required.

### **11.3.3 Business Exceptions**

None.

### **11.3.4 System Exceptions**

None.

## **11.4 Zip**

### **11.4.1 Behavior**

Text field to enter the company's zip code.

### **11.4.2 Validation**

All address formatting rules apply. This field is required. The zip code can be entered and then the user can use the button behind the field to search for the City and State information. Complies with standard address formatting, etc...

### **11.4.3 Business Exceptions**

None.

### **11.4.4 System Exceptions**

None.

## **11.5 Phone**

### **11.5.1 Behavior**

Text field to enter the company's phone number.

### **11.5.2 Validation**

All phone number formatting rules apply. This field is required .



**11.5.3 Business Exceptions**

None.

**11.5.4 System Exceptions**

None.

**11.6 City**

**11.6.1 Behavior**

Text field to enter the company's city.

**11.6.2 Validation**

All address formatting rules apply. This field is required.

**11.6.3 Business Exceptions**

None.

**11.6.4 System Exceptions**

None.

**11.7 State**

**11.7.1 Behavior**

Drop-down field to enter the company's state.

**11.7.2 Validation**

All address formatting rules apply. This field is required.

**11.7.3 Business Exceptions**

None.

**11.7.4 System Exceptions**

None.

**11.8 Contact Last Name**

**11.8.1 Behavior**

Text field to enter an individual's last name.

**11.8.2 Validation**

This field is required.

**11.8.3 Business Exceptions**

None.

**11.8.4 System Exceptions**

None.

## **11.9 Contact First Name**

### **11.9.1 Behavior**

Text field to enter an individual's first name.

### **11.9.2 Validation**

This field is required.

### **11.9.3 Business Exceptions**

None.

### **11.9.4 System Exceptions**

None.

## **12. Add Contact**

### **12.1 Last Name**

#### **12.1.1 Behavior**

Text field to enter an individual's last name.

#### **12.1.2 Validation**

Either of the two fields is required.

#### **12.1.3 Business Exceptions**

None.

#### **12.1.4 System Exceptions**

None.

### **12.2 First Name**

#### **12.2.1 Behavior**

Text field to enter an individual's first name.

#### **12.2.2 Validation**

Either of the two fields is required.

#### **12.2.3 Business Exceptions**

None.

#### **12.2.4 System Exceptions**

None.

## **13. Rates Table**

### **13.1.1 Behavior**

This table displays the car classes and rates for the bill-to account. For display purposes, international considerations for tiered rates have not yet been taken into account, although the functionality is described in the "Rate List Button" text above.

The user can select an amount / car class to be authorized by clicking a car class.

### 13.1.2 *Validation*

None.

### 13.1.3 *Business Exceptions*

None.

### 13.1.4 *System Exceptions*

None.

## 14. Rules

### 14.1 **Tabbing**

Tabbing between fields should be in the order that they are in this document.

## 15. Security

The user must have the appropriate security level to access this screen.

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## 16. System Generated Notes Table (as of 6 August, 2001)

	Note Text	When to generate in Reservation	When to generate in Open	Use Case/s
Reservation becomes an open ticket if reservation has already been	"Ticket Opened"		Create	Oper
Ticket is opened, the information in preference field will be generated as	Any text within the preference field		Create	Oper
Ticket is opened, the text in the vehicle notes, will be generated as a	Text in the field "Vehicle Notes"		Create	Oper
Reservation is matched or unmatched to	Reservation # "XXXXXX" was (un) matched to Ticket # "XXXXXX".		Create/Edit	Oper
Reservation is created	"Reservation Created"	Create		Create
marks the ARMS Status Dialog "Renter Has Been Contacted"	"Renter Has Been Contacted" AND any text entered in the ARMS Notes field	Edit		Navigation/Dialog I
marks the ARMS Status Dialog "Renter Has Not Been Contacted"	"Renter Has Been Contacted" AND any text entered in the ARMS Notes field	Edit		Navigation/Dialog I
Reservation Pick-up date is changed	Pick-up Date "XX/XX/XXXX" was changed to "XX/XX/XXXX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Di
Reservation Pick-up time is changed	Pick-up Time "XX: XX" was changed to "XX: XX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Di
Reservation Pick-up method is	Pick-up Method "XX" was changed to "XX".	Edit	Create (if selected in the Reservation) /Edit	Rates/Di
Reservation Pick-up location is	Pick-up Location "XXXX" was changed to "XXXXX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Di
Reservation Return date is changed	Return Date "XX/XX/XXXX" was changed to "XX/XX/XXXX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Di
Reservation Return time is changed	Return Time "XX: XX" was changed to "XX: XX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Di
Reservation return method is changed	Return Method "XX" was changed to "XX".	Edit	Create (if selected in the Reservation) /Edit	Rates/Di
Source and/or Account Number changed	Rate Source "XXXXX" was changed to "XXXXX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Di
Type is changed	Rate Type "XXXX" was changed to "XXXX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Di
Class is changed	Car Class "XXXX" was changed to "XXXX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Di

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	Note Text	When to generate in Reservation	When to generate in Open	Use Case/
rate source and car class has been changed or the user manually changes any of the rates populated in the vehicle rate	What rate values were changed and what the old and new values are.	Create/Edit	Create/Edit	Rates/D
Reservation return location is changed	Return Location "XXXX" was changed to "XXXXX"	Edit	Create (if selected in the Reservation) /Edit	Pick-u Locati
Pick-up or Branch of the Reservation location is changed	Pick-up Location "GPBR" was changed to "GPBR"	Edit	Create (if selected in the Reservation) /Edit	Pick-u Locati
Pick-up or Branch of the Reservation location is changed	Return Location "GPBR" was changed to "GPBR"	Edit	Create (if selected in the Reservation) /Edit	Pick-u Locati
Product has populated the products and a rate source has been chosen or user manually changes any of the products	What values were changed and what the old and new values are.	Create/Edit	Create/Edit	Products Discou
changes a tax or surcharge.	What values were changed and what the old and new values are.	Create/Edit	Create/Edit	Tax
changes the tax-exempt status.	Tax Exempt Status "XXXX" was changed to "XXXX".	Create/Edit	Create/Edit	Tax/Dri
chooses to "Rent" when a renter "Renter Warning"	"Renter Warning overridden"	Create/Edit	Create/Edit	Basic Res/
chooses to bypass the warning driver's age is either over 70. 21-20 years of age.	"Underage/Overage warning overridden"	Create/Edit	Create/Edit	Basic Res/
changes any phone number of or an additional driver.	What Values were changed and what the old and new values are.	Create (if populated by Driver search)/Edit	Create (if data exists from the reservation) /Edit	Basic Res/
changes any renter or additional first or last name	What values were changed and what the old and new values are	Create/Edit	Create/Edit	Basic Res/
adds or deletes an additional driver	Driver "Last Name, First Name" was removed	Create/Edit	Create (if data exists from the reservation) /Edit	Basic Res/
changes the Referral Account	Referral Account "XXXXX" was changed to "XXXXXX"	Edit	Create (if data exists from the reservation) /Edit	Referr
changes the referral contact. (Referral account is the same)	Referral Contact "XXXX" was changed to "XXXX" for Referral Account "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Referr
adds a "not on file" contact	Not on File Contact "First Name, Last Name" was added for Referral Account "XXXXX".	Create/Edit	Create/Edit	Referr
changes the bill-to account.	Bill-to "XXXX" was changed to "XXXX".	Edit	Create (if data exists from the reservation) /Edit	Bill-t
changes the bill-to contact. (The account is the same)	Bill-To Contact "XXXXX" was changed to "XXXX" for Bill-to account "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-t

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	Note Text	When to generate in Reservation	When to generate in Open	Use Case/s
adds a "not of file" bill-to	Not on file contact "First Name Last Name" was added for Bill-to Account "XXXXX"	Create/Edit	Create/Edit	Bill-T
changes the authorized by (The Bill-to account is the same)	Authorized By "XXXX" was changed to "XXXX" for Bill-to Account "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-t
changes the auth status. (The account is the same)	The Authorization Status was changed from "XXX" to "XXXX" for Bill-to account "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-t
changes the auth %. (The Bill-to account is the same)	The Authorization % was changed from "XX" to "XX" for Bill-to Account "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-t
changes the Max Per day. (The account is the same)	The Maximum Amount Per Day was changed from "XX" to "XX" for Bill-to Account "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-t
changes the Max Billable (The Bill-to account is the same)	The Maximum Billable Amount was changed from "XX" to "XX" for Bill-to Account "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-t
changes the number of days. (The Bill-to account is the same)	The number of days was changed from "XX" to "XX" for Bill-to Account "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-t
changes either the Billing start date and Billing start time (The Bill-to account is the same)	The Billing Start Date and Billing Start Time changed from "XXXXXXX" to "XXXXXXXXXX" for Bill-to Account "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-t
changes either the Billing end date and Billing end time. (The Bill-to account is the same)	The Billing End Date and Billing End Time changed from "XXXXXXX" to "XXXXXXXXXX" for Bill-to account "XXXXX".	Edit	Create (if data exists from the reservation) /Edit	Bill-t
changes the daily rate. (The Bill-to account is the same)	The Daily Rate was changed from "XXXX" to "XXXX" for Bill-to account "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-t
changes the Authorized Car Class (The Bill-to account is the same)	The Authorized Car Class was changed from "XXXXX" to "XXXXX" for Bill-to account "XXXXX".	Edit	Create (if data exists from the reservation) /Edit	Bill-t
changes the Plus Tax check box (The Bill-to account is the same)	What the check box was and what it was changed to	Edit	Create (if data exists from the reservation) /Edit	Bill-t
changes a product or service (The Bill-to account is the same)	What Products were added or deleted and the amounts they were changed from and to.	Create/Edit	Create/Edit	Bill-t
adds a Not on File Bill-to	Not on File Account "XXXXX" has been added as a Bill-to	Create/Edit	Create/Edit	Bill-t
changes the Ro/Po/Cl #. (The Bill-to account is the same)	The Claim/Pol/PO/RO was changed from "XXXXX" to "XXXXX" for Bill-to account "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-t
changes the Claim type. (The Bill-to account is the same)	The Claim Type was changed from "XXXXX" to "XXXXX" for Bill-to account "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-t

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	Note Text	When to generate in Reservation	When to generate in Open	Use Case/Scenario
changes the insured's name.	The Insured's Name was changed from "XXXXXX" to "XXXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to



Project:  
Reservation

Phase:  
Elaboration

Iteration:  
1

## ECARS 2.0 Screen Action Specification: Callback Flag

Version 1.4

Artifact:  
Development Case

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Path:

Last saved:  
11/30/01 9:23 AM

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Screen Action Spec.DOC



<b>Reservation</b>	Version: 1.4
<b>Supplementary Specification</b>	Date: 12/21/01
<b>Callback Flag Screen Action Specification</b>	

## Revision History

Date	Version	Description	Author
September 4, 2001	1.0	Creation	Leanne Bevelhimer
September 17, 2001	1.1	Updates after meeting with Jon and Mary	Leanne Bevelhimer
October 22, 2001	1.2	Updated to reflect proper name in the Options Drop Down	Leanne Bevelhimer
November 20, 2001	1.3	Updated to take out parenthesis reference	Leanne Waugh
November 28, 2001	1.4	Changed based on the defect that the system couldn't generate an error message	Leanne Waugh

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## Screen Action Specification

### 1. Introduction

This document describes the behavioral characteristics associated with the Callback Flag screen, and its related screens.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Screen Shots

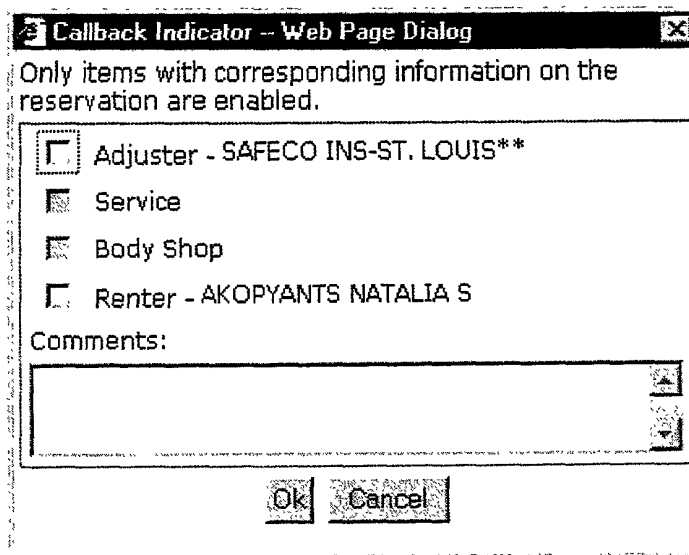


Figure 1: Callback Flag Pop-Up

### 3. Field Descriptions

#### 3.1 Callback Flag Main Page

##### 3.1.1 Warning Message Text Field

###### 3.1.1.1 Behavior

This is a read-only, static text message to the user. It is providing information to the user regarding the usage of the screen. The text should read "Only items with corresponding information on the reservation are enabled."

###### 3.1.1.2 Validation

None identified at this time.

###### 3.1.1.3 Business Exceptions

None identified at this time.

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#### 3.1.1.4 System Exceptions

None identified at this time.

#### 3.1.2 Adjuster Checkbox

##### 3.1.2.1 Behavior

This is a checkbox that allows the user to select an Adjuster Callback Flag. The user can check any number of the checkboxes at a given time. If an Adjuster Callback Flag was already selected for a reservation and that reservation was saved/completed, then the checkbox will be checked, but the field will be disabled. The user will not be able to unselect it.

If the user is not allowed to select an adjuster callback because there is not a bill-to entered, then the checkbox will be disabled.

##### 3.1.2.2 Validation

This field is validated by not allowing the user to select it if the bill-to information is missing from the reservation. It is also validated by not allowing the user to unselect an adjuster callback from a previously completed reservation.

##### 3.1.2.3 Business Exceptions

There must be a Bill-To associated with the Reservation before an Adjuster Callback Flag can be generated.

##### 3.1.2.4 System Exceptions

If a Bill-To is not associated with the Reservation, then the user will not be able to select the Adjuster Flag.

#### 3.1.3 Service Checkbox

##### 3.1.3.1 Behavior

This is a checkbox that allows the user to select a Service Callback Flag. The user can check any number of the checkboxes at a given time. If a Service Callback Flag was already selected for a reservation and that reservation was saved/completed, then the checkbox will be checked, but the field will be disabled. The user will not be able to unselect it.

If the user is not allowed to select a service callback because there is not a shop entered, then the checkbox will be disabled.

##### 3.1.3.2 Validation

This field is validated by not allowing the user to select it if the shop information is missing from the reservation. It is also validated by not allowing the user to unselect a service callback from a previously completed reservation .

##### 3.1.3.3 Business Exceptions

There must be a Body Shop associated with the Reservation before a Service Callback Flag can be generated .

##### 3.1.3.4 System Exceptions

If a Shop is not associated with the Reservation, then the user will not be able to select the Service Flag.

#### 3.1.4 Body Shop Checkbox

##### 3.1.4.1 Behavior

This is a checkbox that allows the user to select a Body Shop Callback Flag. The user can check any number of the checkboxes at a given time. If a Body Shop Callback Flag was already selected for a reservation and that reservation was saved/completed, then the checkbox will be checked, but the field will be disabled. The user will not be able to unselect it.

If the user is not allowed to select a body shop callback because there is not a shop entered, then the checkbox will

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be disabled.

### 3.1.4.2 Validation

This field is validated by not allowing the user to select it if the shop information is missing from the reservation. It is also validated by not allowing the user to unselect a Body Shop callback from a previously completed reservation.

### 3.1.4.3 Business Exceptions

There must be a Body Shop associated with the Reservation before a Body Shop Callback Flag can be generated.

### 3.1.4.4 System Exceptions

If a Shop is not associated with the Reservation, then the user will not be able to select the Service Flag.

## 3.1.5 Renter Checkbox

### 3.1.5.1 Behavior

This is a checkbox that allows the user to select a Renter Callback Flag. The user can check any number of the checkboxes at a given time. If a Renter Callback Flag was already selected for a reservation and that reservation was saved/completed, then the checkbox will be checked, but the field will be disabled. The user will not be able to unselect it.

If the user is not allowed to select a Renter callback (because there is not a renter entered), then the checkbox will be disabled.

### 3.1.5.2 Validation

This field is validated by not allowing the user to select it if the renter information is missing from the reservation. It is also validated by not allowing the user to unselect a Renter callback from a previously completed reservation.

### 3.1.5.3 Business Exceptions

There must be a renter name associated with the Reservation before a Renter Callback Flag can be generated.

### 3.1.5.4 System Exceptions

If a Renter is not associated with the Reservation, then the user will not be able to select the Renter Flag.

## 3.1.6 Adjuster Information Text Field

### 3.1.6.1 Behavior

This is a read-only, static text message to the user. It provides information to the user regarding the information previously entered on the reservation screen. It will display the bill-to name that was entered on the bill-to panel of the reservation screen.

If no bill-to was entered, nothing will display.

### 3.1.6.2 Validation

None identified at this time.

### 3.1.6.3 Business Exceptions

None identified at this time.

### 3.1.6.4 System Exceptions

None identified at this time.

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### 3.1.7 Service Information Text Field

#### 3.1.7.1 Behavior

This is a read-only, static text message to the user. It provides information to the user regarding the information previously entered on the reservation screen. It will display the shop name that was entered on the vehicle/shop panel of the reservation screen.

If no shop was entered, nothing will display.

#### 3.1.7.2 Validation

None identified at this time.

#### 3.1.7.3 Business Exceptions

None identified at this time.

#### 3.1.7.4 System Exceptions

None identified at this time.

### 3.1.8 Body Shop Information Text Field

#### 3.1.8.1 Behavior

This is a read-only, static text message to the user. It provides information to the user regarding the information previously entered on the reservation screen. It will display the shop name that was entered on the vehicle/shop panel of the reservation screen.

If no shop was entered, nothing will display.

#### 3.1.8.2 Validation

None identified at this time.

#### 3.1.8.3 Business Exceptions

None identified at this time.

#### 3.1.8.4 System Exceptions

None identified at this time.

### 3.1.9 Renter Information Text Field

#### 3.1.9.1 Behavior

This is a read-only, static text message to the user. It provides information to the user regarding the information previously entered on the reservation screen. It will display the renter name that was entered on the driver panel of the reservation screen. It will be displayed in the format of last name, first name.

If no renter was entered, nothing will display.

#### 3.1.9.2 Validation

None identified at this time.

#### 3.1.9.3 Business Exceptions

None identified at this time.

#### 3.1.9.4 System Exceptions

None identified at this time.

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### 3.1.10 Comment Text Box

#### 3.1.10.1 Behavior

This is a free-form text field that allows the user to enter reservation comments about the callback flags that are selected. These notes appear only on this screen. They do not appear in the callback section of legacy .

#### 3.1.10.2 Validation

None identified at this time.

#### 3.1.10.3 Business Exceptions

None identified at this time.

#### 3.1.10.4 System Exceptions

None identified at this time.

### 3.1.11 OK Button

#### 3.1.11.1 Behavior

When the user presses the 'OK' button, the system saves the callback flag and notes that the user has entered and closes the callback flag screen.

The user is permitted to press the 'OK' button and have no items checked.

If the Callback Flag screen is navigated to by virtue of the user completing the reservation, after the user presses the 'OK' button and the information is validated, the reservation completion process continues.

#### 3.1.11.2 Validation

When the user presses the 'OK' button, the system validates the Adjuster, Body Shop and Service data to insure that the appropriate information (Bill-To or Body Shop) is already contained within the reservation.

#### 3.1.11.3 Business Exceptions

The user cannot save an adjuster callback flag if the Bill-To information is not in the reservation. The user cannot save a Body Shop or Service callback flag if the Body Shop information is not in the reservation .

#### 3.1.11.4 System Exceptions

Due to the way that the screen works with the disabling of invalid options, there should not be the case of the user checking an invalid flag. However, if the flags do not validate, the system will alert the user and return him/her to the callback flag screen.

### 3.1.12 Cancel Button

#### 3.1.12.1 Behavior

When the user presses the 'Cancel' button, the system closes the Callback Flag screen.

If the Callback Flag screen is navigated to by virtue of the user completing the reservation, when the user presses the 'Cancel' button the complete reservation process is cancelled and the Callback Flag window is closed .

#### 3.1.12.2 Validation

None identified at this time.

#### 3.1.12.3 Business Exceptions

None identified at this time.

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#### 3.1.12.4 System Exceptions

None identified at this time.

### 4. Rules

- Callback Flag data is only saved to the reservation if all the changes to the reservations are saved.
- The user has the option to add/edit callback flags to any reservation in his/her group .
- This screen will not be available for NatRes Reservations.
- The screen will appear to the user when he/she starts the completion process of a new reservation and from the 'Reservation Callback' option in the 'Options' drop down menu in the title bar.
- If the user has selected a callback and then edited other reservation information that invalidates the callback, the system will not save that particular callback flag. The user will not be notified of this.

### 5. Security

- The security for Callback Flag is based upon the Reservation security model. If the user has permissions to edit a reservation, he/she will be able to add/edit callback flags. In general, all users in a group can modify all reservations for that group.

### 6. Questions



# ECARS 2.0 - Customer Contact Synchronization Document

[illegible]

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## Revision History

Date	Version	Description	Author
08/09/2001	1.0	Created document	Johnny S. Johnston

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# Contact Synchronization Document

## 1. Introduction

This document will describe the flow of the Customer Contact Synchronization between the GUI ECARS 2.0 system and the AS400 legacy system.

## 2. Contact Synchronizations Transaction Flow

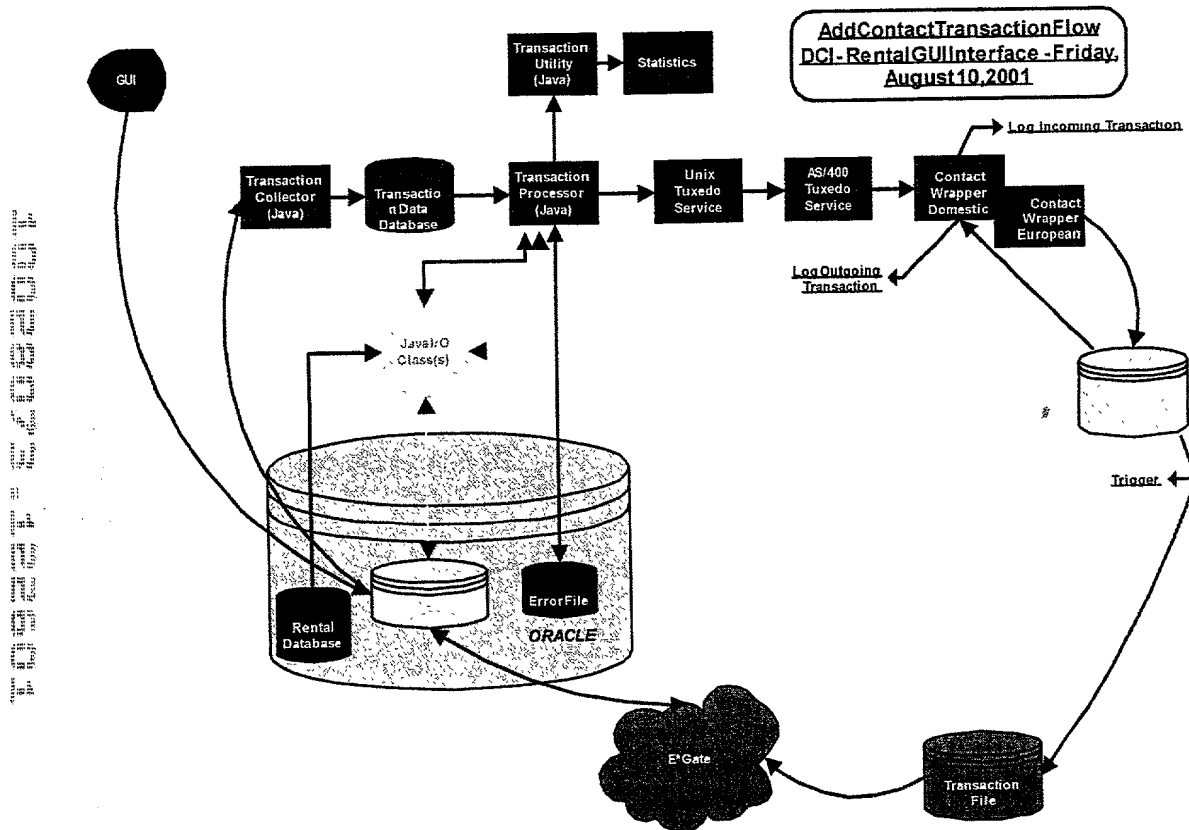


Figure 1 – Transaction Flow

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### **Contact Synchronization Description:**

After the Rental GUI system writes the reservation transaction to the Oracle database, it will initiate a Java object, DCI\_ResClient, created by DCI, sending the reservation number and whether the transaction was an Add or Update.

DCI\_ResClient will use Rental GUI's I/O class to retrieve and transform the reservation transaction data into the necessary input parameters.

The input parameters will be sent to a UNIX Tuxedo Service, ResService.

DCI\_ResClient will also distribute the data to another Tuxedo Service, RESSRVR400, on the appropriate AS/400 machine.

A queueing mechanism will be used between the two Tuxedo services to manage transaction data.

RESSRVR400 will pass the input parameters to the wrapper program of the legacy reservation program, CCRS01.

Upon entering the wrapper program, the input parameters will be written to a transaction log file.

The wrapper program will perform edits based on business rules and update legacy reservation files on the AS/400.

When the reservation has been successfully written (a new legacy reservation number is created), the wrapper program will write a record to the Rental GUI/Legacy Reservation Number Cross-reference file.

When the wrapper program has completed processing, it will write the Input Parameters and any errors encountered to the transaction log file and return this data to RESSRVR400.

RESSRVR400 will return the Input Parameters and errors, if applicable, to ResService. It will write information regarding any errors to a log file on Oracle.

### **ERROR HANDLING:**

Position 99 of the ERRORS field represents if the reservation transaction was written to the legacy file, RACBRMST, successfully.

It will return a value of '0' if the write failed and '1' if the write was successful. Position 1 – 98 of the ERRORS field represent error codes and the program that received it.

The ERRORS field is separated into 7 groups of error code (4 char) and program (10 char). The error codes reference error message descriptions found within the legacy reservation programs.

The error message descriptions can be accessed by a reference file on the AS/400 DEV machine.

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### Other information:

#### Unix to AS400 wrapper:

This module accepts contact data from the Tuxedo Service (UNIX), performs an appropriate data manipulation and passes it on to the contact RPG wrapper program.

#### Create Contact:

When called by Rental Redesign system, the Create Contact module accepts the required core contact data generated by a Rental Redesign create contact transaction.

The Create Contact module is called and validates the existence of the required data. if required data is not present, the module will generate error codes which will be logged on the AS/400.

If the required data is sent, the Create Contact module is passed to the AAID01 wrapper program. Only 1 transaction will be processed at a time. The Rental Transaction Location Group/Branch number must be sent to identify what machine a contact resides on.

When the unique contact id# limitation is reached, '999' will be assigned. The only issue this creates during Reservation is identifying a contact as 'Unknown' when the contact, in actuality, is known. For future, this will create an issue during Open Contract in that a contact id# other than '999, must be identified.

#### Contact Conversion:

Contact will be added and maintained from current state using owning group, legacy customer number, transactions source machine name, and contact adjustor source number (hccnno).

One record per group, customer number, source machine, and contact adjustor source number (hccnno) will exist in the new table.

Each contact will be assigned a new unique contact sequence number, seq\_nbr.

It will be related to the oracle Cust\_Mast via the new cust\_seq\_nbr

Logic:

#### Create/Add Transaction:

If Group, Legacy Customer Number, source machine, and source number (hccnno) exists ignore the transaction.

If Group, Legacy Customer Number, source machine, and source number (hccnno) does not exist, create the new Contact and assign a new contact seq\_nbr. \_\_\_\_

Using a retrieve to the Oracle Cust\_Mast by group and legacy customer number retrieve the new cust\_seq\_nbr.

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Error processing needs to be established if referential integrity error is received.

Re-write or flag the transaction record so that it is processed again. The transaction record re-processing needs to be limited to a specific number of times so as not to cause an infinite loop. Kick out the transaction or log the data after the specified number of re-tries.

#### **Update/Delete Contact Transaction:**

Retrieve data using legacy group, legacy customer number, source machine name, source sequence number (hccnno)

Update contact information if it changes.

Delete a contact if it was deleted in legacy

#### **Contact Data:**

File DRHISC is updated continuously throughout the day. The only transactions we want to pass, for now, to rental are add's, deletes, and changes to contact name, status, or customer type. All other changes need not be sent to future state.

---

<Company Name>

---

## ECARS 2.0 - Daily Reservation Detail Screen Action Specification

1. The user will be able to view the reservation details for a specific date and time.  
2. The user will be able to view the reservation details for a specific date and time.  
3. The user will be able to view the reservation details for a specific date and time.  
4. The user will be able to view the reservation details for a specific date and time.  
5. The user will be able to view the reservation details for a specific date and time.  
6. The user will be able to view the reservation details for a specific date and time.  
7. The user will be able to view the reservation details for a specific date and time.  
8. The user will be able to view the reservation details for a specific date and time.  
9. The user will be able to view the reservation details for a specific date and time.  
10. The user will be able to view the reservation details for a specific date and time.



<Project Name>	Version: <1.0>
Supplementary Specification	Date: <dd/mmm/yy>
<document identifier>	

## Revision History

Date	Version	Description	Author
5/10/2001	1.0	Created Document	Johnny S. Johnston
12/21/2001	1.1	Removed No Show and updated after modeler meeting.	Johnny S. Johnston
09/04/2001	1.2	Updated to reflect changes from Navigation	James Atteberry
10/03/2001	1.3	Added screen shot from Res Pilot version	James Atteberry
10/26/2001	1.4	Updated with changes for Res Pilot	James Atteberry

<Project Name>	Version: <1.0>
Supplementary Specification	Date: <dd/mm/yy>
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## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Daily Reservation Detail screen.

The system must be able to distinguish, from the physical location of the terminal, the proper screen language presentation as well as any field formatting applicable to that particular locale.

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## 2. Daily Reservation Detail

Reservation Detail - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

Reservation Tickets Callbacks Vehicle Tools Help

Detail Summary Forecasting Notification Search

Reservation List for: 5/9/2001 (MM/DD/YYYY)

Group: 01 - St. Louis Branch: The First Branch Edit Reservation Number:

Pickup Date	Pickup Time	Renter Name	Pickup Method	Pickup Location	Car Class	Preference	Reservation Type
5/9		Washington, George	DEL	Front step of City Hall	LCAR		Corporate
5/9	8:30 AM	Atteberry, James	W/IN		SCAR001		Retail
5/9	8:45 AM	Snuffitelli, Joe	P/UP	Home	ECAR	Something with 4 wheels and an engine that won't leak oil.	Insurance
5/9	8:45 AM	Zukow, Thomas	DEL/R	Service garage for Lou Fusz Dodge		Dodge Viper with tow package installed	Dealership
5/9	10:30 AM	Antillas, Wedge	W/IN		XCAR		Corporate
5/9	12:00 PM	Solo, Hans			XCAR	Anything that can make the Kessel Run	Retail
5/9	12:15 PM	Graves, Paul	CWC		ICAR	V6 engine	Insurance
5/9	1:20 PM	Jones, Christopher	P/UP	County Jail		No bars in windows	Government
5/9	1:20 PM	Smith, Chris	W/IN		CCAR		Retail
		NoDate, NoTime	W/IN				Retail

Total number of reservations: 10

Refresh Print List New Reservation

Res - 411781 Tkt - 234567 Cbk - 363221

Figure 1 - Daily Reservation Detail

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Reservation Detail - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Reservation Tickets Callbacks Vehicle Tools Help

Detail Summary Forecasting Notification Search

Reservation List for: 5/9/2001 (MM/DD/YYYY)

Group: 01 - St. Louis Branch: The First Branch Edit Reservation Number: Edit

Pickup Date	Pickup Time	Renter Name	Pickup Method	Pickup Location	Car Class	Preference	Reservation Type
5/9		Washington, George	DEL	Front step of City Hall.	LCAR		Corporate
5/9	8:30 AM	Atteberry, James	W/IN		SCAR001		Retail
5/9	8:45 AM	Snuffitelli, Joe	P/UP	Home	ECAR	Something with 4 wheels and an engine that won't leak oil.	Insurance
5/9	8:45 AM	Zukow, Thomas	DEL/R	Service garage for Lou Fusz Dodge		Dodge Viper with tow package installed	Dealership
5/9	10:30 AM	Antilles, Wedge	W/IN		XCAR		Corporate
5/9	12:00 PM	Solo, Hans			XCAR	Anything that can make the Kessel Run	Retail
5/9	12:15 PM	Graves, Paul	CWC		ICAR	V6 engine	Insurance
5/9	1:20 PM	Jones, Christopher	P/UP	County Jail		No bars in windows	Government
5/9	1:20 PM	Smith, Chris	W/IN		CCAR		Retail
		NoDate, NoTime	W/IN				Retail

Total number of reservations: 10

Refresh Print List New Reservation

Res - 411781 Tkt - 234567 Cbk - 363221

Figure 2 – Reservation Detail – Reservation Pilot version

### 3. Group

#### 3.1 Behavior

This search criterion will be limited to those groups that exist at any point in time for which the search is being executed. For reservation pilot, this drop down will not be enabled. It will default to the physical location's group and the user will not be able to switch branches. The selection of "All" is NOT included in the list as it would return too large of a result set. This search criteria area will be a drop-down box. The users would also like to have the ability to type a character, alpha or numeric, into the criteria area and have the drop down list position to the character. (If the user enters an "H" the drop down list would position to the first string beginning with "H" in the list) Upon initial presentation of the panel this should default to the group associated to the terminal locale.

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### 3.2 Validation

The items appearing in the list are static; the user cannot add items to the list dynamically. This should, in some manner, be initially defaulted to the terminal's group, (based on physical location)

### 3.3 Business Exceptions

None identified at this time.

### 3.4 System Exceptions

None identified at this time.

## 4. Branch

### 4.1 Behavior

This search criterion will be limited to those branches that exist within the group at any point in time for which the search is being executed . The selection of "All" is NOT included in this selection list as it would return too large of a result set . This search criteria area will be a drop-down box . The users would also like to have the ability to type a character, alpha or numeric, into the criteria area and have the drop down list position to the character . (If the user enters an "H" the drop down list would position to the first string beginning with "H" in the list)

Upon initial presentation of the panel this should default to the branch associated to the terminal locale. Branch items appearing in the list will be limited to the Group item selected . Once the selected Group item has changed, the branch will be set to blanks . This will require the user to select a branch, at which time the display area will be refreshed, repopulated and repositioned. For Reservation Pilot, the Branch list will NOT contain a blank entry.

### 4.2 Validation

The items appearing in the list are static; the user cannot add items to the list dynamically. This should, in some manner, be initially defaulted to the terminal's branch, (based on physical location).  
This list will be limited to the branches associated with the group selected.

### 4.3 Business Exceptions

If a user does not enter a branch, or blanks out this area, and attempts to refresh the list, an error message will be presented. See the "error message" supplemental spec for exact text.

### 4.4 System Exceptions

None identified at this time.

## 5. Reservation List Date

### 5.1 Behavior

This area will be a text field which will allow the user to enter the date for which they want to view reservations. The format to enter is mmddyyyy, 8 numeric characters, without any delineating characters. There will also be a calendar icon function which will allow the user to select it and be shown a monthly calendar for them to select a date . ( As outlined in the HTML standards for Calendar Controls.)  
Upon initial presentation of the panel this should default to the current date.

### 5.2 Validation

Validation will occur when the user submits the form. It must be a valid month, day and year combination. Please see error message supplemental spec for exact text.

### 5.3 Business Exceptions

If a user does not enter a date, or blanks out this area, and attempts to refresh the list, an error message will be presented. See the "error message" supplemental spec for exact text.

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## 5.4 System Exceptions

None identified at this time.

## 6. Edit Reservation Number Field

### 6.1 Behavior

This criteria area will be an alphanumeric field . It will not be formatted for presentation purposes .  
When a user enters an alphanumeric string, and selects the edit function, the system will attempt to find an exact match for the characters entered. Also, if the user is in the process of entering a reservation, the focus will be on the edit function. With the focus on the edit function, if the "enter" key is selected, it will operate the same as if the edit function were selected .

If a single, exact match, is found the system will take the user to the edit/view reservation detail panel.  
For reservation pilot, the system will search only reservations created within the Physical Terminal Location's group number.

### 6.2 Business Exceptions

If no matches are found the system presents a message. See error message spec for exact text.

If there are two or more matches found, the system displays the results as a display list exactly as described in the Reservation Search results display area. (Included below for clarity)

#### **Multiple Result Display Criteria – Identical to Search Result Display**

This display area provides the user with the search result list. The result list will be comprised of 8 static columns. The specific column order is:

- 1) The group number and branch number will be concatenated to form this column.
- 2) The pick up date is the next column, formatted by locale.
- 3) The pick up time is the next column, formatted by locale.
- 4) The renter's last name and first name will be concatenated to form this column.
- 5) The pick-up method.
- 6) The car class.
- 7) The reservation type.
- 8) The reservation number.

The display presentation for each type of information will adhere to result list standards.

The default sort order is:

- 1) Pick-up group and branch, in numeric ascending order.
- 2) Pick-up date, in chronologically in ascending order.
- 3) Pick-up time, in chronologically ascending order.

For date and time sorting the following will be the standard:

1. Reservations with a date, but no time.
  2. Reservations with a date and a time.
  3. Reservation with no date, but have a time.
  4. Reservations with no date and not time.
- 4) Renter last and first name, in alphabetically ascending order of last name.

The users would like to have the ability to sort the columns in both ascending and descending order. This will sort the entire result set. When a column is selected to sort, all other default or secondary sort criteria is abandoned. The manner in which Oracle sorts ascending and descending values will be used. The display area will position to the top of the entire result list based on the column selected to sort.  
If the user moves forward or backward within the result list, the sort will still be in effect.

The capability also needs to exist where a user can indicate or select an individual reservation from the



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result list, and perform a simple task, (a function button, icon, mouse click) which would then open the reservation for editing purposes. Within this display list the user would select the Renter Name from the display list and perform the designated function. This would be contingent upon the user having the appropriate security to edit the reservation selected. This functionality will be consistent and standard throughout the application.

### 6.3 System Exceptions

None identified at this time.

## 7. Reservation Display Area

### 7.1 Behavior

The display area will initially be defaulted to all reservations, for the default group, branch and date, positioned to where the pick up time is within a time frame of the current time less 30 minutes. All of the reservations for the group, branch and date will be returned for display, however the system will position the list to the reservation with the current time less 30 minutes.

Further elaboration/rules about how the display will position to a reservation follows:

- 1) If there are not any reservations for the 30 minute time frame, AND there are reservations with the date but no time, the list will be positioned to the first reservation without a time.
- 2) If there are not any reservations for the 30 minute time frame, but there is a reservation between the 30 minute time frame cutoff, and those with dates and no time, the system will position to the reservation in the future which is closest to the current time.
- 3) If there are not any reservations for the 30 minute time frame, AND there are not any with dates and no time, the system will position to the reservation in the future which is closest to the current time.
- 4) If there are not any reservations for the 30 minute time frame, AND there are not any with dates and no time, AND there are not any in the future, the system will position to either the first reservation with no date but has a time, or if none of those exist, the system will position to the first reservation without a date and without a time, if any exist.

Examples:

- 1) If the user signs on at 8:00 A.M., and there are not any reservations for 8:00 A.M. or before, and there are reservations with the date but without a time, the list will be positioned to those reservations without a time.
- 2) If the user signs on at 8:00 A.M., and there are not any reservations for between 7:30 and 8:00 A.M., but there is one for 7:15 A.M., and 8:15 A.M., and there are reservations with the date but without a time, the list will be positioned to the reservation in the future which is closest to 8:00 A.M., which is the 8:15 A.M., reservation.
- 3) If the user signs on at 8:00 A.M., and there are not any reservations for between 7:30 and 8:00 A.M., and there are reservations with the date but without a time, but there is one for 8:15 A.M. the list will be positioned to the reservation in the future which is closest to 8:00 A.M., which is the 8:15 A.M., reservation.
- 4) If the user signs on at 8:00 A.M., and there are not any reservations for between 7:30 and 8:00 A.M., and there are no reservations with the date but without a time, and there are not any reservations for a future time, the system position to those at the bottom of the list, the first reservation without a date but with a time, and if none of those exist, it will position to the first reservation without a date and without a time.

The scroll bar will be enabled to allow the user to access all reservations.

The result list will be comprised of 7 static columns. The specific column order is:

- 1) The pick up time is the first column, formatted by locale.
- 2) The renter's last name and first name will be concatenated to form this column.

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- 3) The pick-up method.
- 4) The pick-up location.
- 5) The car class.
- 6) Preference.
- 7) Rental Type.

Sort order of the list will be:

Reservations with a date, but no time.

Reservations with a date and a time.

The result list will display the reservations in chronological order from the start of the 30 minute time frame.

Reservation with no date, but have a time.

Reservations with no date and not time.

The users would like to have the ability to sort the columns in both ascending and descending order. This will sort the entire result set. When a column is selected to sort, all other default or secondary sort criteria is abandoned. The manner in which Oracle sorts ascending and descending values will be used. The display area will position to the top of the entire result list based on the column selected to sort. If the user moves forward or backward within the result list, the sort will still be in effect.

The capability also needs to exist where a user can indicate or select an individual reservation from the result list, and perform a simple task, (a function button, icon, mouse click) which would then open the reservation for editing purposes. Within this display list the user would select the Renter Name from the display list and perform the designated function. This would be contingent upon the user having the appropriate security to edit the reservation selected. This functionality will be consistent and standard throughout the application.

## 7.2 **Validation**

The user may not select to edit a reservation that is outside of their security boundaries. If the user changes the group and the branch is positioned to blanks, the result list should be cleared also.

## 7.3 **Business Exceptions**

## 7.4 **System Exceptions**

None identified at this time.

# 8. **Results Feedback Line Area**

## 8.1 **Behavior**

This feedback area provides the user with the total number of reservations for the day. If there are 150 reservations for the group, branch, date, with or without pickup time, and then others without dates, the total shown would include all 150 which have the specific date, whether or not a pick-up time is specified, plus those without a date.

## 8.2 **Validation**

None identified at this time.

## 8.3 **Business Exceptions**

None identified at this time.

## 8.4 **System Exceptions**

Buttons would be enabled appropriately for list display area.

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## 9. Button Line Area

### 9.1 Behavior

The Print List image/button will print the entire list of reservations for the day.

The Refresh image/button will reposition the entire list to the current time less 30 minute time frame.

The New Reservation button will create a new reservation, changing the screen to that reservation.

### 9.2 Validation

None identified at this time.

### 9.3 Business Exceptions

None identified at this time.

### 9.4 System Exceptions

None identified at this time.

## 10. Rules

Types of reservations, for the defaulted group and branch, or the selected group and branch, which will not be included in the displays are:

- Voided Reservations.
- Reservations transferred to another branch.
- Reservation that have been attached to an open ticket.

The refresh will be a manual process, no automatic refresh will happen while the user is on this panel.

## 11. Security

The user must have the appropriate security level to access this screen. The user is allowed to view or print anything. It is when they attempt to edit a reservation that their security restrictions will be enforced.

**<Company Name>**

**□ SUBJECT \\* MERGEFORMAT □ ECARS 2.0 - Daily  
Reservation Summary□  
Screen Action Specification**

<Project Name>	Version: <1.0>
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## Revision History

Date	Version	Description	Author
5/15/2001	1.0	Created Document	Johnny S. Johnston
5/29/01	1.1	Updated for list display resolution	Johnny S. Johnston
09/04/2001	1.2	Updated to reflect changes from Navigation use case	James Atteberry
10/03/2001	1.3	Added screen shot from Reservation Pilot version.	James Atteberry
10/26/2001	1.4	Clarified Branch list behavior for Reservation Pilot	James Atteberry

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# Screen Action Specification

## 1. Introduction

This document will describe the behavioral characteristics associated with the Daily Reservation Summary screen.

The system must be able to distinguish, from the physical location of the terminal, the proper screen language presentation as well as any field formatting applicable to that particular locale.

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<Project Name>	Version: <1.0>
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## 2. Daily Reservation Summary

Reservation Summary - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

Reservation Summary for: 5/9/2001 (MM/DD/YYYY)

Group: 01 - St. Louis Branch: The First Branch

Pickup Time	Reservations	Pickup Method					Car Class
		W/IN	P/UP	DEL	CWC	DEL/R	
No Time	5						
12:00 AM							
12:30 AM							
1:00 AM							
1:30 AM							
2:00 AM							
2:30 AM							
3:00 AM							
3:30 AM							
4:00 AM							
4:30 AM							
5:00 AM							#
5:30 AM							
6:00 AM							
No Date	20						

Total number of reservations: 85

Refresh Print Summary New Reservation

Res - 411781 Tkt - 234567 Cbk - 363221

Figure 1 - Daily Reservation Summary



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Reservation Summary - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Reservation Summary Contracts Callbacks

Detail Summary Forecasting Notification Search

Reservation Summary for: 5/9/2001 (MM/DD/YYYY)

Group: 01 - St. Louis Branch: The First Branch

Pickup Time	Reservations	Pickup Method					Car Class
		W/IN	P/UP	DEL	CWC	DEL/R	
No Time	5						
12:00 AM							
12:30 AM							
1:00 AM							
1:30 AM							
2:00 AM							
2:30 AM							
3:00 AM							
3:30 AM							
4:00 AM							
4:30 AM							
5:00 AM							
5:30 AM							
6:00 AM							
No Date	20						

Total number of reservations: 85

Refresh Print Summary New Reservation

Res - 411781 Tkt - 234567 Cbk - 363221

Figure 2 – Daily Reservation Summary – Reservation Pilot version

## Group

### 3.1 Behavior

This search criterion will be limited to those groups that exist at any point in time for which the search is being executed. The selection of "All" is NOT included in the list. This search criteria area will be a drop-down box. For Reservation Pilot, the drop down will only display the user's physical terminal's location and the user will not be able to select another group. The users would also like to have the ability to type a character, alpha or numeric, into the criteria area and have the drop down list position to the character. (If the user enters an "H" the drop down list would position to the first string beginning with "H" in the list) Upon initial presentation of the panel this should default to the group associated to the terminal locale.

### 3.2 Validation

The items appearing in the list are static; the user cannot add items to the list dynamically. This should, in some manner, be initially defaulted to the terminal's group. (based on physical location)

### 3.3 Business Exceptions

None identified at this time.

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### 3.4 System Exceptions

None identified at this time.

## 4. Branch

### 4.1 Behavior

This search criterion will be limited to those branches that exist within the group at any point in time for which the search is being executed . The selection of "All" is NOT included in this selection list. This search criteria area will be a drop-down box . The users would also like to have the ability to type a character, alpha or numeric, into the criteria area and have the drop down list position to the character. (If the user enters an "H" the drop down list would position to the first string beginning with "H" in the list) Upon initial presentation of the panel this should default to the branch associated to the terminal locale . Branch items appearing in the list will be limited to the Group item selected . Once the selected Group item has changed, the branch will be set to blanks . This will require the user to select a branch, at which time the display area will be refreshed, repopulated and repositioned. For Reservation Pilot, the Branch list will NOT contain a blank entry.

### 4.2 Validation

The items appearing in the list are static; the user cannot add items to the list dynamically . This should, in some manner, be initially defaulted to the terminal's branch. (based on physical location). This list will be limited to the branches associated with the group selected .

### 4.3 Business Exceptions

If a user does not enter a branch, or blanks out this area, and attempts to refresh the list, an error message will be presented. See the "error message" supplemental spec for exact text.

### 4.4 System Exceptions

None identified at this time.

## 5. Reservation List Date

### 5.1 Behavior

This area will be a text field which will allow the user to enter the date for which they want to view reservations . The format to enter is mmddyyyy, 8 numeric characters, without any delineating characters . There will also be a calendar icon function which will allow the user to select it and be shown a monthly calendar for them to select a date . ( As outlined in the HTML standards for Calendar Controls.) Upon initial presentation of the panel this should default to the current date .

### 5.2 Validation

Validation will occur when the user submits the form. It must be a valid month, day and year combination.

### 5.3 Business Exceptions

If a user does not enter a date, or blanks out this area, and attempts to refresh the list, an error message will be presented. See the "error message" supplemental spec for exact text.

### 5.4 System Exceptions

None identified at this time.

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## 6. Reservation Display Area

### 6.1 Behavior

The display area will initially be defaulted to all reservations, for the default group, branch and date. The list is positioned to the ½ hour increment prior to the current time on initial entry, or on refresh, and displays the number of reservations within ½ hour time increments. The scroll bar will be enabled to allow the user to view all reservations.

The result list will be comprised of 7 static columns, and a text area. The specific column order is:

- 1) Time is the first column, formatted by locale, and shown in ½ hour increments.
- 2) The number of reservations that have a pick-up time associated with that ½ hour increment will be displayed next.  
The next 5 columns will be the number of times that particular pick-up method appears on reservations within the ½ hour increment. The 5 pick-up methods are:
  - 3) Walk In.
  - 4) Pick-Up.
  - 5) Delivery.
  - 6) Customer Will Call.
  - 7) Delivery With Ride Back.
- 8) Car Class Summary Area – This will display all of the car classes on the reservations within that ½ hour time increment and the number of times that particular car class appears.

The sort order of this list is strictly by the pick-up time and where it falls within the ½ hour time increments displayed. If there are no reservations for a given ½ time increment, then the second column will not have any values shown and will be blank.. The list will start at 12:00 A.M. and continue until 11:30 P.M. Reservations without a time will appear in a header above the list. Reservations without a date and time will appear in a footer below the list.

(These hours may be subject to change in the future, or modifiable, on a case-by-case basis, based on a specific branch's hours of operation.)

The columns within this display list will NOT be sortable.

The capability also needs to exist where a user can select a ½ hour time increment and be taken to, or have displayed, the Daily Reservation Detail panel positioned to that selected time increment.

### 6.2 Validation

The user may not select to edit a reservation that is outside of their security boundaries.

### 6.3 Business Exceptions

If a user attempts to edit a reservation that is outside of their security boundaries, an error message of "User is not authorized to edit this reservation" should be displayed.

### 6.4 System Exceptions

None identified at this time.

## 7. Results Feedback Line Area

### 7.1 Behavior

This feedback area provides the user with the total number of reservations for the day. If there are 150 reservations for the selected group, branch and date, with or without pickup time, and 10 without pickup

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dates and without pick-times, the total shown would be 160.

## 7.2 Validation

None identified at this time.

## 7.3 Business Exceptions

None identified at this time.

## 7.4 System Exceptions

Button would be enabled appropriately for list display area.

## 8. Button Line Area

### 8.1 Behavior

The Refresh image/button will refresh and repopulate the entire list .

The Print List image/button will print the entire list of reservations for the day .

The New Reservation button will create a new reservation, changing the screen to that reservation.

### 8.2 Validation

None identified at this time.

### 8.3 Business Exceptions

None identified at this time.

### 8.4 System Exceptions

None identified at this time.

## 9. Rules

Types of reservations, for the defaulted group and branch, or the selected group and branch, which will not be included in the displays are :

- Voided Reservations .
- Reservations transferred to another branch .
- Reservation that have been attached to an open ticket .

The refresh will be a manual process, no automatic refresh will happen while the user is on this panel .

## 10. Security

The user must have the appropriate security level to access this screen. The user is allowed to view or print anything. It is when they attempt to edit a reservation that their security restrictions will be enforced.

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# **<ECARS 2.0 Reservation>** **Use Case Specification: <Edit Branch/ARMS/NATRES and Void>**

**Version <1.0>**  
**Draft**

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## Revision History

Date	Version	Description	Author
<7/20/01>	<1.0>	<details>	<J. Gaines>
09/12/2001	1.1	Updated screen shots	James Atteberry
10/11/2001	1.2	Removed Clear button from Driver prototype and updated screen shot.	James Atteberry
10/12/2001	1.3	Clarified wording on how editing a NatRas reservation works. Clarified wording on handling Voided and Closed reservations.	James Atteberry
10/18/2001	1.4	Added Record Lock Requirements	J. Gaines

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# Use Case Specification: <Edit Branch/ARMS/NATRES and Void>

## Edit Branch/ARMS/NATRES and Void

### 1.1 Brief Description

This use case describes the edit process and field behaviors and dependencies when editing a branch reservation, an ARMS reservation and a NATRES reservation. Void rules for reservations are also included.

### Pre-Conditions

- 1.2 The user can enter the reservation for editing from all points of entry into reservation.
- 1.3 The system is able to determine what kind of reservation the user is editing (branch, arms, natres, internet)
- 1.4 The system is able to determine whether a reservation is for the group of the physical terminal location or from another group.

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**Figure 1: Driver Screen:**

## Branch Reservation Edit

### 1.5 Update

- Update button does not show for Edit.

### 1.6 Clear

- Clear button blanks out all driver fields except Country and country issued which are defaulted to the country of the terminal's physical location.

### 1.7 Driver Fields

#### 1.7.1 Name:

- If last name is deleted, the user cannot save the reservation. No edit rules for first name in reservation.
- If the user selects Update and the driver's last name and/or first name is changed, no driver associated information fields are cleared.

#### 1.7.2 Phone Numbers:

- If Work Number is deleted, the extension will blank out.

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- If Other Phone is deleted, type will reset to blank.

### 1.7.3 Address:

- No edit rules for deleting or changing address in reservation.

### 1.7.4 Driver's License Fields:

- If a driver's license number is added then the state issued, expiration date and DOB fields need to be entered as well.
- If a driver's license number is edited, none of the other license fields need to be changed or blanked out by the system.
- If any of the four driver's license fields are deleted, the other driver's license information that is entered remains, but upon saving the reservation, the system will alert the user to the missing piece(s) of driver's license information.

### 1.7.5 Primary Payment Method:

- No edit rules exist for changing primary payment method in reservation.

**Figure 2: Referral Screen:**

Reservation : 411781

**Referral Source**

Referral

☒ Account

Account Name:  Account Number:

Contact Name:

☐ Employee

**Referral Detail**

Bavanan, Inc	Account Number:	G08799
8374 Olive	Account Type:	Corporate
Address line 2	Owning Gp/Br:	0101
St. Louis, MO 63132	Contact Phone:	3144691770

## 1.8 Referral Fields

### 1.8.1 Account Name:

- If account name is changed (to a valid account), account number will change appropriately and

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the contact name will now be "select"

#### 1.8.2 Account Number:

- If account number is changed, the account name will change appropriately and the contact name will now be "select".

#### 1.8.3 Employee Number:

- There are no edit rules for reservation on changing or deleting an employee number.

#### 1.8.4 Contact Name

- If contact name is deleted, an error message will be displayed to the user to add a contact name upon complete reservation.

#### 1.8.5 If the user decides to remove an account as a referral option, this is the way the app should behave:

- If the user blanks out the account name and tabs off or leaves the field, the Account Number and Contact should also be blanked out.
- If the user blanks out the account number and tabs off or leaves the field, the Account Name and Contact should also be blanked out.

**Figure 3: Rates/Dates Screen (Top portion) :**

Car Class	Daily		Weekly		Monthly		Hourly		Mileage Charge	No Charge
	Rate	Mileage	Rate	Mileage	Rate	Mileage	Rate	Mileage		
ECAR	15.99	150	59.99	750	179.99	1500	5.99	0.15		

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## 1.9 Date Fields

### 1.9.1 Pick up Date:

If a pickup date/time already exists in a reservation:

- If the pick up date is deleted, the pick up time is also blanked.
- If the pick up date is changed, the new date follows the same rules for entering pickup date.
- If pick up date is entered and it is after the return date the user will receive an error message that pick up date is after the return date and the correction must be made by the user.
- If the pickup date is in the past but the field has not been touched during edit, the system will not validate the date in this field during edit.

### 1.9.2 Pick Up Time:

- If the pickup time is changed, the new time must meet the same rules for entering pickup time.

### 1.9.3 Pickup Method:

- If the pick up method is changed, the location will remain.

### 1.9.4 Return Date:

If a return date/time already exists in a reservation:

- If the Return date is deleted, the return time is also blanked.
- If the return date is changed, the new date follows the same rules for entering return date.
- If return date is entered and it is before the pick up date, the user will receive an error message that return date is before the return date and the correction must be made by the user.
- If the return date is in the past but the field has not been touched during edit, the system will not validate the date in this field during edit.

### 1.9.5 Return Time:

- If the return time is changed, the new time must meet the same rules for entering return time.

### 1.9.6 Return Method:

- If the return method is changed, the location will be blanked out.

## 1.10 Rate Fields

### 1.10.1 Account Name

- If account name is deleted, the account number and rate plan fields will be blanked.
- If the account name is changed, the same guidelines for entering an account name apply. Must choose from dropdown or from Search. Once a new account name is chosen, the account number will populate and if there is only one rate plan for that account that will populate as well. If there is more than one rate plan to choose from the rate plan field will display "select".

### 1.10.2 Account Number

- If account number is deleted, the account name and rate plan fields will be blanked.
- If the account number is changed, the same guidelines and validations for entering an account number apply. Once a new account number is chosen, the account name will populate and if there is only one rate plan for that account that will populate as well. If there is more than one rate plan to choose from the rate plan field will display "select".

### 1.10.3 Rental Type

- No business rules for editing Rental type apply in reservation.

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#### 1.10.4 Rate Plan

- If the user changes the rate plan, "get rates" must be pressed to retrieve the rates for that rate plan.

#### 1.10.5 Car Class

- If car class is changed, "get rates" must be pressed to retrieve rates for the new car class entered.
- If car class is deleted and the get rates button is pressed the table of rates for the rate source/plan entered will be displayed. The user has the ability to select a car class from the table.
- If there was no car class originally entered but there were rates entered and the user selects a car class, the rate originally entered will remain unless the user manually types over the rates or selects a car class from the table of rates after choosing get rates.
- Car class may be manually entered with no other rate information.

#### 1.10.6 Rates

- Rates May be manually entered without a Rate Source.
- Rates can be deleted.
- Rates that are edited will remain after the rate source is changed unless a different car class is selected from get rates.
- Hitting Cancel after getting rates will keep rates.

**Figure 4: Rates/Dates Screen (Middle Portion):**

Reservation: 411781

Car Class	Daily Rate	Daily Mileage	Weekly Rate	Weekly Mileage	Monthly Rate	Monthly Mileage	Hourly Rate	Mileage Charge	No. Charge
ECAR	15.99	150	59.99	750	179.99	1500	5.99	0.15	<input type="checkbox"/>

Billing Cycle: [ ] Vehicle Preferences: [ ]

Products: CDW PAI

Account Details: Hot Line number 1, Hot Line number 2, More, VLF

Discounts and Specials: ☐ Add A Special, Start Date, Start Time, End Date, End Time

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#### 1.10.7 Billing Cycle

- There are no edit business rules associated with this field in reservation.

#### 1.10.8 CDW

- There are no edit business rules associated with this field in reservation.

#### 1.10.9 PAI

- There are no edit business rules associated with this field in reservation.

**Figure 5: Rates/Dates Screen (Discounts and Specials):**

Reservation : 411781

**Rates/Dates**

Account Details

Hot Line number 1

Hot Line number 2

More

**Discounts and Specials**

☐ Add A Special

Start Date Start Time End Date End Time

MM/DD/YYYY HH:MM A MM/DD/YYYY HH:MM A

Rate

Rate	Type	Mileage	Mileage Type	No Charge
	Per Day Special		Per Day	

☐ Add A Discount

%

Cancel

### 1.11 Discounts and Specials

#### 1.11.1 Add a special

If add a special is unchecked then start date, start time, end date, end time, special rate and mileage remains but the information is ignored by the system.

#### 1.11.2 Start date

- If start date is changed, the system will validate that the start date is not after the end date.
- If there is a pick up date and the user changes the special start date to a date before the pick up date, the system will inform the user that the start date cannot be before the pick up date.
- If there is no pick up date, and the user changes the special start date to a date before the current date, the system will inform the user that the start date cannot be before the current date.

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- If the start date is deleted, the system will display a message that a start date must be specified for a special.
- If the start date is in the past but the field has not been touched during edit, the system will not validate the date in this field.
- 

#### 1.11.3 End date

- If the end date is changed the system will validate that the end date is not before the start date and provide a message if it is.
- If there is a return date, then the special end date cannot be after the return date, otherwise the system will display a message that the special end date must be equal to or before the return date entered.
- If the end date is deleted, the system will display a message that an end date must be specified for a special.
- If the end date is in the past but the field has not been touched during edit, the system will not validate the date in this field.
- 

#### 1.11.4 Start Time

- No business rule for deleting the start time of a special.

#### 1.11.5 End time

- No business rule for deleting the end time of a special.

#### 1.11.6 Rate

- No business rule for deleting the rate on a special.

#### 1.11.7 Type

- There is no validation on changing the type.

#### 1.11.8 Mileage

- There is no validation on changing or deleting the mileage for a special.

#### 1.11.9 Mileage Type

- There is no validation on changing the mileage type.

#### 1.11.10 No charge

- If there is a mileage charge on the reservation there must be a mileage charge for the special.
- If there is no mileage charge on the reservation there can't be a mileage charge on the special.

#### 1.11.11 Add a discount

- If the add a discount box is unchecked when editing, the discount percent remains but is ignored by the system.
- If the discount box is checked when editing, a discount must be entered.

#### 1.11.12 Discount Percent

- The discount amount can't be changed to over 50% or less than 1%, otherwise the system will inform the user as such. (Discounts must be entered in whole numbers).



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## 1.12 Bill-to Screen

1.12.1 If the user decides to remove an account as a bill-to account, this is the way the app should behave:

- If the user blanks out the account name and tabs off or leaves the field, the Account Number and Contact should also be blanked out.
- If the user blanks out the account number and tabs off or leaves the field, the Account Name and Contact should also be blanked out.

## 1.13 Shop/Vehicle Screen

1.13.1 If the user decides to remove an account as a referral, this is the way the app should behave:

- If the user blanks out the account name and tabs off or leaves the field, the Account Number and Contact should also be blanked out.
- If the user blanks out the account number and tabs off or leaves the field, the Account Name and Contact should also be blanked out.

## 1.14 ARMS

### 1.14.1 Protected Fields in ARMS

- If the reservation originated from the ARMS system there are certain fields that will be protected/(not editable by the user). They are as follows:
  1. Claim/POL/PO Number
  2. Claim Type (C, I, T)
  3. Insured's Name
  4. Auth By
  5. Direct Bill (Y, N)
  6. % Auth (not a requirement for Res Pilot)
  7. Max Days Authorized
  8. Max Billable Amount
  9. Policy Max Amount
  10. Daily Max Amount
  11. Date of Loss
  12. Bill-To Start Date
  13. Bill-To End Date (Auth until Date)
  14. Number of Days Authorized(not a requirement for Res Pilot)
  15. Daily Rate Authorized
  16. Tax Authorized (Y, N)
  17. Car class Authorized
  18. Cancellation Date (Last Day Date)
  19. Bill-To Account Number (Except if root only is entered then protected once full account number is entered)

### 1.14.1.1 Editable Fields in ARMS:

(Note: The following editable fields for ARMS reservations follow the same edit rules as the non-arms reservations that were covered above in Driver)

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- Driver Last Name
- Driver First Name
- Hm Phone
- Work Phone
- Extension
- Other Phone
- Phone Description
- Driver's Address
- Zip
- County
- City
- State
- Other Address
- Employer
- License Number
- Expiration Date
- State Issued
- DOB
- SSN
- Height
- Weight
- Hair Color
- Eye Color

#### 1.14.2 ARMS Indicator

ARMS Reservation Modal Dialog Box

**ARMS Status -- Web Page Dialog**

☐ Renter has been contacted.  
(Remove from list)

☐ Renter has NOT been contacted.  
(Keep on list)

Note:

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This modal dialog box will appear whenever a user chooses to complete an ARMS reservation and the status of the reservation is either "Not Contacted" or "Contact Attempted".

Upon initial display of the dialog box, the radio button will default to "Renter has been contacted. (Remove from list)".

If "Renter has been contacted" is selected and the user chooses "OK", the system will do the following things:

- The status of reservation will be changed to "Contacted"
- A note will be added to the Reservation notes with the following text, "Renter has been contacted."
- If the user has entered any text into the "Notes" text area, the entered text will be added to the reservation notes as a second note. If no text is entered, A note should not be generated.

NOTE: Each of the notes generated will be captured like any other system-generated note and given a note type of "Reservation". See the System Generated notes Supplemental Spec.

If "Renter has Not been contacted is selected and the user chooses "OK", the system will do the following things:

- The status of reservation will be changed to "Contact Attempted"
- A note will be added to the Reservation notes with the following text, "Attempted to contact Renter."
- If the user has entered any text into the "Notes" text area, the entered text will be added to the reservation notes as a second note. If no text is entered, a note should not be generated.

NOTE: Each of the notes generated will be captured like any other system-generated note and given a note type of "Reservation". See the System Generated notes Supplemental Spec.

If the user chooses to cancel, the system will return the user back to the reservation where the user initially selected to complete the reservation. No changes will be made to the reservation status and no notes will be generated. If the user tries to complete again, the dialog box will display again.

## **1.15 NATRES**

### **1.15.1.1 Protected Fields in Natres**

- A Branch employee cannot edit a National Reservation originated reservation. If a National Reservation is selected for editing by a branch employee, all fields for the Reservation are view only.
- (See Enhancement #1080 – Ability to Edit Natres Reservations).

### **1.16 Completing after Editing information**

- Saving an edited reservation follows the same business rules as saving a created reservation and the same validations occur and informational messages and error messages will display upon committing the edited information to the database.

### **1.17 Void**

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1. ARMS and NATRES reservations may not be voided by branch personnel.
2. An outside group cannot void branch reservations for a group other than the owning group of the physical terminal signed onto by the user.
3. For branch reservations, void must be available to the user on all reservation screens.
4. The system must confirm to the user that a reservation is being voided.
5. The void option should only be available once a reservation has been saved and retrieved for edit.
- 6.

#### Basic Flow:

1. User A accesses Reservation 123456.
2. The system opens Reservation 123456 to User A.
3. The system locks Reservation 123456 for User A immediately.
  - a. If User B tries to access Reservation 123456, the use case continues at Alternative Flow (Reservation Locked).
  - b. If User A's id is used again to access Reservation 123456 on a second terminal, the use case continues at Alternative Flow (Stealing Record Lock).
  - c. If User A has the Reservation 123456 open more than 30 minutes.
  - d. If User B makes updates to Reservation 123456 in Legacy while A has the Reservation open in GUI, the use case continues at alternative flow (Legacy to GUI Sync).
4. If User A completes the reservation in less than 30 minutes and they have continually updated the reservation at least every 4 minutes and 59 seconds the system will save the updates and release the logical lock on the transaction at the database.
5. If after 30 minutes, User B accesses Reservation 123456 and views, edits or saves the reservation, the use case continues at Alternative Flow (30 Minute Lock Released).

#### Alternative Flows:

6. Reservation Locked.
  - a. User B tries to gain access to Reservation 123456.
  - b. The system displays a Lock Warning Screen (File in Use) that informs the user of the following information:
    - i. A message that the reservation is in use and locked by another employee.
    - ii. Employee Number of the person who has the reservation locked for editing.
    - iii. *The user's Group Branch that has the reservation locked for editing. (For Retrofit)*
    - iv. *The user's name that has the reservation locked for editing. (For Retrofit)*
  - c. The User has the option to either Cancel or View Reservation 123456 Read Only.
    - i. If User B cancels, the user is returned to where they tried to enter the reservation from and the use case ends.
    - ii. If User B chooses to Read Only, User B can read the reservation but will not be able to edit any of the fields.
7. Stealing Record Lock
  - a. User A's id is used again to access Reservation 123456 on a second terminal.
  - b. Both terminals have simultaneous lock on the reservation.
  - c. Whichever terminal saves first wins and releases the record lock.
  - d. *For retrofit, User A will not be able to steal record lock from self.*
8. 30 Minute Lock Released
  - a. After 30 minutes, the system releases the record lock
  - b. User B accesses Reservation 123456
  - c. User B updates Reservation 123456.

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- d. The system saves Reservation with User B's updates.
- e. When User A tries to save Reservation 123456 after User B has already saved it, the system will display a message that the reservation has been updated and ask if they would like to view the updated version.

#### 8.5 30-Minute Lock Released but Not Accessed by User B.

- a. After 30 minutes, the system releases the record lock.
- b. No other users access Reservation 123456.
- c. User A attempts to save Reservation 123456.
- d. System locates User A's dormant ID as last locked ID.
- e. System saves Reservation 123456 to User A.

#### 9. Legacy to GUI Sync.

- a. During the time User A has Reservation 123456 open in GUI, User B accesses Reservation 123456 in Legacy. (User B, in Legacy, is not locked out)
- b. User B updates and saves to reservation 123456.
- c. System initiates sync between GUI and Legacy.
- d. Record updated in Oracle.
- e. Lock is released
- f. User A attempts to complete Reservation 123456 and the system will display a message that the reservation has been updated and ask if they would like to view the updated version.

Note: One Record Lock message needed for pilot. Additional Record Lock messages will be used in Retrofit.

### **Special Edit Rules**

1. The following rules apply for the editing of all date fields:  
When editing a reservation if the date for any date field is not added, deleted or changed the field is not validated by the system.  
If a date in a date field is changed, added or deleted then the system will validate those fields upon leaving the screen in the same way as validated when creating a reservation.  
These rules apply to all date fields in reservation.
2. When a user opens a NatRes, voided or closed reservation, or a reservation attached to a ticket, a popup window will appear immediately after the reservation is opened. The message will tell the user that changes made to this reservation cannot be saved. The Complete button will be disabled on all screens. The Complete option will be removed from the menu bar for this transaction. The Transfer and Void options will be removed from the title bar option control.

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3. 3. Voided reservations, reservations attached to open tickets and closed reservations (reservations attached to closed tickets) cannot be searched for and do not appear on the Reservation Summary screens. These reservation may only be viewed by entering the reservation number in Reservation Fast Path.

## Post-Conditions

### 1.19 < Post-condition One >

## Extension Points

### 1.20 <Name of Extension Point>

# ECARS 2.0

## Supplemental Specification: Error Messages

Version 1.4

When using a translation tool, it is important to ensure that the translation is accurate and that the original meaning is preserved. This document provides a history of the translations performed by the tool.

## Translation History

Date	Version	Description	Author
09/06/01	1.0	First Draft	M. Pallia
9/18/01	1.1	Reworked the tables to include a validation on and implemented column.	M. Pallia
9/20/01	1.2	Re-work the tables to include all validation as was determined in the screen specs.	M. Pallia
9/24/01	1.3	Includes all the changes the users recommended	M. Pallia
10/24/01	1.4	Document includes German Translations	M. Pallia
11/29/01	1.5	Updated error dialog screenshots	James Atteberry



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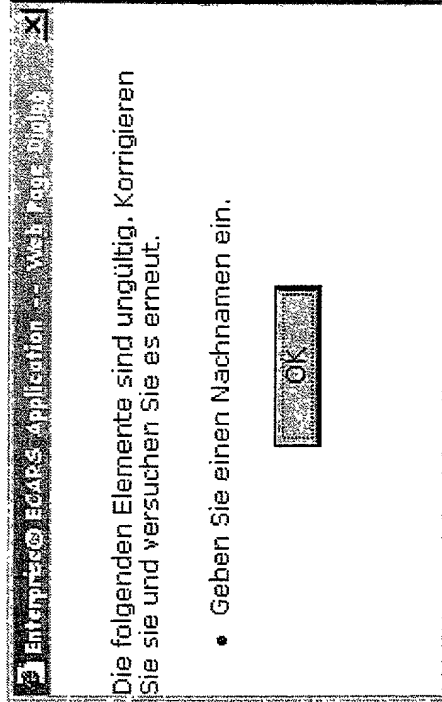
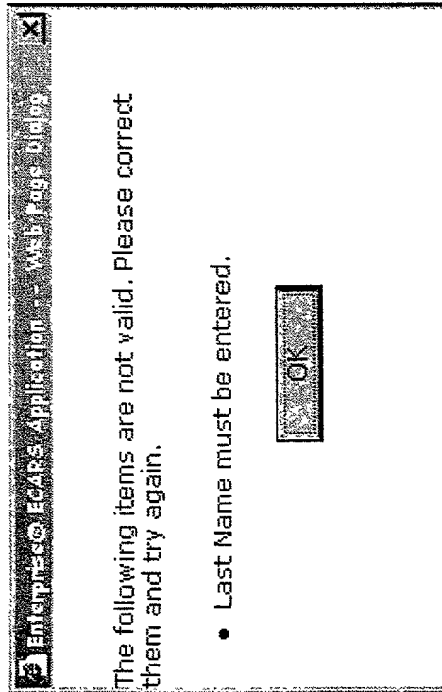
# Supplemental Specification

## 1. Error Messages

This document explains the text and events that trigger a feedback message in the Reservation Sub-Application. This will also serve as the standards for field level validation errors.

## 2. Error Message Screen

All validation messages to the user will be displayed in the following form:



## 3. System Exceptions

System exceptions will not be displayed to the user whenever possible. If they are, these will be the error messages that will be displayed.

Event	Message	Translation German
If the exception crashes the app.	System Level Error. Please call help desk if error continues.	Fehler auf Systemebene. Wenden Sie sich an die Hilfezentrale, wenn der Fehler weiterhin besteht.
If the system has a null-pointer error which does not crash the app.	System Level Error. Please hit CMD 5 to refresh the page.	Fehler auf Systemebene. Drücken Sie CMD 5 zur Aktualisierung der Seite.

## 4. Field Validation Errors

These errors should be consistent across all sub-apps within the system and are specific to certain field types.

### 4.1 Date Fields

Event	Message	Translation German
User enters an invalid date	"Field name" does not contain a valid date.	"Field Name" enthält kein gültiges Datum.

### 4.2 Time Fields

Event	Message	Translation German
User enters an invalid time	"Field name" does not contain a valid time.	"Field Name" enthält keine gültige Zeit.

### 4.3 Phone Number Fields

#### 4.3.1 North America

Event	Message	Translation German
User enters a phone number that has more or less than 10 numeric characters	"Field Name" must be 10 characters.	"Field Name" muss zehn Zeichen umfassen.
User enters a phone number that has text in it.	"Field Name" may contain numeric characters only	"Field Name" darf lediglich numerische Zeichen enthalten.

#### 4.3.2 UK, Ireland, Scotland, Germany

Event	Message	Translation German
User enters a phone number that has more than 13 characters in it.	"Field Name" cannot contain more than 13 characters	"Field Name" darf nicht mehr als dreizehn Zeichen enthalten.
User enters a phone number that does not have a special character between the area code and phone number.	"Field Name" has an invalid phone number format	"Field Name" enthält ein ungültiges Telefonnummern-Format.

### 4.4 Numeric fields

Event	Message	Translation German
User enters non-numeric characters into a numeric only field	"Field Name" must contain numeric characters only.	"Field Name" darf lediglich numerische Zeichen enthalten.

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User enters a negative value	"Field Name" may not be a negative value.	"Field Name" darf keinen negativen Wert enthalten.
User enters more than 2 digits after a decimal	"Field Name" has too many digits after the decimal.	"Field Name" enthält zu viele Dezimalstellen.
User enters a decimal into a field that allows only whole number entries	"Field Name" must contain whole numbers only.	"Field Name" darf nur ganze Zahlen enthalten.
User enters a number that is too large	"Field Name" is too large. Please enter a smaller value.	"Field Name" ist zu groß. Geben Sie einen kleineren Wert ein.

#### 4.5 Transaction area

Event	Message	Translation German
User attempts to open or view a 4 <sup>th</sup> transaction	Only 3 transactions can be opened at one time.	Nur drei Transaktionen können gleichzeitig geöffnet sein.

#### 5. Log In Errors

Event	Message	Translation German
User enters an invalid User name or Password.	Invalid User Name/Password Verify the CAPS LOCK function is off.	Ungültiger Benutzername/ungültiges Passwort. Stellen Sie sicher, dass die FESTSTELLTASTE nicht eingerastet ist.
User when changing their password enters an invalid password.	Your password must be at least six characters in length or Password matched one of five previous passwords.	Ihr Passwort muss mindestens sechs Zeichen umfassen und darf nicht mit einem der fünf letzten Passwörter übereinstimmen.
User when verifying their new password, do not match.	The passwords you typed do not match. Re-submit your request.	Die von Ihnen eingegebenen Passwörter stimmen nicht überein. Versuchen Sie es erneut.
If any of the required fields are not entered.	Enter data into all of the fields.	Machen Sie in allen Feldern Angaben.
This displays after 3 failed attempts to log on to the application.	Security Access Denied.	Zugang aus Sicherheitsgründen abgelehnt.
User password has expired	Password Expired. Enter New Password	Passwort abgelaufen. Geben Sie ein neues Passwort ein.
For some reason the system does not recognize the user.	You have been locked out of the system. Contact your designated network administrator.	Sie sind vom System ausgeschlossen worden. Wenden Sie sich an Ihren zuständigen Netzwerkadministrator.
The user's enter info is not confirmed by the	Authentication Failed. Re-submit your request.	Authentifizierung fehlgeschlagen. Versuchen

system for any reason.	Sie es erneut.
------------------------	----------------

## 6. Business Rule Validation Errors

These errors occur when a specific business rule is not met. These will be handled individually page by page.

### 6.1 Reservation Search

Event	Message	Translation German
The user enters a Date Reservation taken that is greater than the current date	Date Reservation Taken cannot exceed Today's date.	Das Datum der Reservierungsaufnahme darf nicht nach dem heutigen Datum liegen.
The user enters a pick-up date to that is prior to the Pick up date from	End Date range must be after Start Date.	Der Bereich des Enddatums muss nach dem Startdatum liegen.

### 6.2 Reservation Detail

Event	Message	Translation German
The user refreshes with the branch area blanked out	You must select a Branch.	Wählen Sie eine Filiale.
The user refreshes with the Date area blanked out	You must enter a Date.	Geben Sie ein Datum ein.
The user refreshes with an invalid date entered (North American Version)	The date entered at the top of the screen is invalid. Please ensure date is in MM/DD/YYYY format.	Not Needed. This is North American version only
The user refreshes with an invalid date entered (UK Version)	The date entered at the top of the screen is invalid. Please ensure date is in DD/MM/YYYY format.	
The user refreshes with an invalid date entered (Germany Version)	The date entered at the top of the screen is invalid. Please ensure date is in TT/MM/JJJJ format.	

### 6.3 Reservation Summary

Event	Message	Translation German
The user leaves the branch area blank.	You must select a Branch.	Wählen Sie eine Filiale.
The user refreshes with the Date area blanked out	You must enter a Date.	Geben Sie ein Datum ein.
The user refreshes with an invalid date entered (North American Version)	The date entered at the top of the screen is invalid. Please ensure date is in MM/DD/YYYY format.	Not Needed. This is North American version only
The user refreshes with an invalid date entered (UK Version)	The date entered at the top of the screen is invalid. Please ensure date is in DD/MM/YYYY format.	
The user refreshes with an invalid date entered (Germany Version)	The date entered at the top of the screen is invalid. Please ensure date is in TT/MM/JJJJ format.	

## 6.4 Reservation Forecasting

Event	Message	Translation German
The user leaves the branch area blank	You must select a Branch.	Wählen Sie eine Filiale.
The user refreshes with the Date area blanked out	You must enter a Date.	Geben Sie ein Datum ein.
The user refreshes with an invalid date entered (North American Version)	The date entered at the top of the screen is invalid. Please ensure date is in MM/DD/YYYY format.	Not Needed. This is North American version only
The user refreshes with an invalid date entered (UK Version)	The date entered at the top of the screen is invalid. Please ensure date is in DD/MM/YYYY format.	
The user refreshes with an invalid date entered (Germany Version)	The date entered at the top of the screen is invalid. Please ensure date is in TT/MM/JJJJ format.	

## 6.5 Reservation Notification

None

## 6.6 Repeat Renter Search

Event	Message	Translation German
DOB is the only search criteria	Date of Birth cannot be the only search criteria. Enter at least one more criteria.	Das Geburtsdatum darf nicht das einzige Suchkriterium sein. Geben Sie mindestens ein weiteres Kriterium ein.
Last name is the only search criteria	Last Name cannot be the only search criteria. Enter at least one more criteria.	Der Nachname darf nicht das einzige Suchkriterium sein. Geben Sie mindestens ein weiteres Kriterium ein.

## 6.7 Driver Screen

Event	Message	Translation German
User completes or leaves screen without a Last Name	Last Name must be entered.	Geben Sie einen Nachnamen ein.
User enters an Other Phone number and no phone Type is specified	Phone Type must be selected if Other Phone Number is entered.	Wenn eine zusätzliche Telefonnummer eingegeben wird, muss der Telefonnummern-Typ gewählt werden.
User enters a License Number and does not enter a value for Date of Birth	Date of Birth must be entered if a License Number is specified.	Wenn eine Führerschein-Nummer genannt wird, muss ein Geburtsdatum eingegeben werden.
User enters a License Number and does not enter a value for Expiration Date	Expiration Date must be entered if a License Number is specified.	Wenn eine Führerschein-Nummer genannt wird, muss ein Gültigkeitsdatum eingegeben werden.
User enters a License Number and does not enter a value for State Issued	State Issued must be selected if a License Number is specified.	Wenn eine Führerschein-Nummer genannt wird, muss der Ausstellungsort ausgewählt werden.
User enters a License Number and does not enter a value for Country Issued	Country Issued must be selected if a License Number is specified.	Wenn eine Führerschein-Nummer genannt wird, muss das Ausstellungsland eingegeben werden.

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User enters an Expiration Date that is prior to the current day	Drivers License is Expired.	Führerschein ist ungültig.
Date of Birth is under 18 years of age	Driver is under 18. Do Not Rent.	Fahrer ist unter 18 Jahre alt. Nicht vermieten.
Date of Birth is from 18 to 20 years of age	Driver is 18 to 20 years old.	Fahrer ist zwischen 18 und 20 Jahre alt.
Date of Birth is from 21 to 24 years of age	Driver is 21 to 24 years old.	Fahrer ist zwischen 21 und 24 Jahre alt.
Driver's Date of Birth is 70 or over	Driver is 70 or older.	Fahrer ist 70 oder älter.

**6.8 Other Address Screen**

None

**6.9 Cash Qualification Screen**

None

**6.10 Insurance Detail Screen**

Event	Message	Translation German
If any data is present in the following fields: Carrier, Policy Number, Expiration Date, Collision Deductible, Comprehensive Deductible, Liability, and Insurance Company Contact, the rest of the listed fields must have data as well.	"Field name" must be entered.  (NOTE: each field that is not entered will be displayed and have its own error message)	"Field Name" muss eingegeben werden.  (HINWEIS: Jedes Feld ohne Angabe wird mit einer eigenen Fehlermeldung angezeigt.)
Insurance Policy Expiration Date is prior to the current date	Insurance Policy is expired.	Versicherungspolice ist nicht mehr gültig.

**6.11 Additional Driver screen**

All the same validations as the Driver screen.

**6.12 Referral Screen**

Event	Message	Translation German
User selects an account, but does not select a contact	A Contact must be selected.	Ein Kontakt muss ausgewählt werden.
User enters an invalid account number	Account Number not found.	Kontonummer nicht gefunden.

**6.13 New Contact**

Event	Message	Translation German
The user hits add new contact button without entering any	A Contact Last Name and/or First Name must be	Für den Kontakt muss ein Nachname bzw.

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data into Contact Last Name or Contact First Name	entered.	Vorname angegeben werden.
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#### 6.14 Account Search

Event	Message	Translation German
User attempts to initiate a search with Account type as "all" and Group as "all" as the only two search criteria	Requested search is too large. Please narrow search criteria.	Angeforderte Suche ist zu umfangreich. Schränken Sie die Suchkriterien ein.

#### 6.15 Employee Search

None

#### 6.16 Dates and Rates

Event	Message	Translation German
The user selects a pick-up date that is prior to the current date	Pick-up Date cannot be prior to Today's date.	Das Abholdatum darf nicht vor dem heutigen Datum liegen.
The user selects a time that is outside of the branch's operating hours.	Pick-up time is outside of branch operating hours.	Die Abholzeit liegt außerhalb der Öffnungszeiten der Filiale.
The user selects a time that is outside of the branch's operating hours.	Return time is outside of branch operating hours.	Die Rückgabezeit liegt außerhalb der Öffnungszeiten der Filiale.
The user selects a return date that is prior to the pick-up date	Return Date range must be after Pick-up Date.	Das Rückgabedatum muss nach dem Abholdatum liegen.
The user selects a pick-up date that is more than 13 months from the current date	Pickup date cannot be 13 months from today's date.	Das Abholdatum darf nicht dreizehn Monate nach dem heutigen Datum liegen.
A user enters an invalid account number	Account Number not found.	Kontonummer nicht gefunden.
No rate plans are returned after a user selects a rate source.	No rates found.	Keine Tarife gefunden.
A user enters a car class that is not valid	Car Class entered is Invalid.	Eingegebene Fahrzeugklasse ist ungültig.
A user selects a rate plan and car class and the car class has no rates	No rates found.	Keine Tarife gefunden.
A user selects a rate plan and no rates are set-up	No rates found.	Keine Tarife gefunden.
A user enters a special and does not select a billing cycle.	A billing cycle must be selected if a special is entered.	Bei Eingabe von besonderer Angaben muss ein Rechnungsmodus ausgewählt werden.
A user enters a special start date that is prior to the Reservation Pick-up date	Special Start Date cannot be prior to the Pick up Date.	Das Special-Startdatum darf nicht vor dem Abholdatum liegen.

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A user enters a special start date that is prior to today's date and no pick-up date is entered	Special Start Date cannot be prior to Today's Date.	Das Special-Startdatum darf nicht vor dem heutigen Datum liegen.
User enters a Special start time that is before the current time.	Special Start Time cannot be prior to the current time.	Die Special-Startzeit darf nicht vor der aktuellen Uhrzeit liegen.
User enters a Special Start time that is before the pick-up time.	Special Start Time cannot be prior to the Pick-up Time	Die Special-Startzeit darf nicht vor der Abholzeit liegen.
If the user selects the "add special" check box, all of the following fields are required: Special Start Date, Special Start Time, Special End Date and Special End Time	"Field Name" must be entered.  (NOTE: Each field that is not entered will be displayed and have its own error message)	"Field Name" muss eingegeben werden.  (HINWEIS: Jedes Feld ohne Angabe wird mit einer eigenen Fehlermeldung angezeigt.)
A user enters an end date that is prior to the start date.	Special End Date range must be after Special Start Date.	Der Bereich des Special-Enddatums muss nach dem Special-Startdatum liegen.
A user enter an end date that is after the return date	Special End Date cannot exceed the Return Date.	Das Special-Enddatum darf nicht nach dem Rückgabedatum liegen.
User selects No Charge mileage for a special when the Rate Mileage is Limited	Special Mileage must be Limited Mileage if the Regular Mileage is Limited Mileage.	Wenn "Reguläre Kilometerzahl" auf "Begrenzte Kilometerzahl" lautet, muss auch "Special-Kilometerzahl" auf "Begrenzte Kilometerzahl" lauten.
User selects Limited mileage for a special when the Rate Mileage is No Charge	Special Mileage must be No Charge if the Regular Mileage is No Charge.	Wenn "Reguläre Kilometerzahl" auf "Keine Gebühr" lautet, muss auch "Special-Kilometerzahl" auf "Keine Gebühr" lauten.
User enters a discount rate that is larger than 50.	Discount Percentage cannot exceed 50%.	Der Nachlass in Prozent darf nicht über 50% liegen.

## 6.17 Bill-to Screen

Event	Message	Translation German
A user enters an invalid account number	Account Number not found.	Kontonummer nicht gefunden.
A user enters an account number that is not billable	This Account is not billable.	Für dieses Konto kann keine Rechnung erstellt werden.
A user selects a bill to account but no contact	A Contact must be selected.	Es muss ein Kontakt ausgewählt werden.
A user selects an Authorization Start date that is prior to the Pick-up Date	Authorization Start Date range cannot be prior to the Reservation PickUp Date.	Bereich für Startdatum der Genehmigung muss nach dem Abholdatum für die Reservierung liegen.
		Translation UK Authorisation Start Date range cannot be prior to the Reservation Pick-up Date.
A user selects an Authorization Start date that is after the	Authorization Start Date range cannot be later than	Bereich für Startdatum der Genehmigung darf nicht

Reservation Return Date	the Reservation Return Date.	nach dem Rückgabedatum für die Reservierung liegen.
		****Translation UK. Authorisation Start Date cannot be later than the Reservation Return Date.
A user selects an End date that is prior to the start date	Authorization End Date range must be after Authorization Start Date.	Das Enddatum der Autorisierung darf nicht nach dem Startdatum der Autorisierung liegen.
A user enters authorization dates and has not selected an authorization status of Authorized.	An Authorization Status of "Authorized" must be selected if Authorization Start or End Dates are entered.	Wenn Start- bzw. Enddatum der Autorisierung eingegeben werden, muss für den Autorisierungsstatus "Autorisiert" gewählt werden.
The user selects the rate list button and no bill to account has been selected	A Bill-to account must be selected.	Ein Konto für Rechnungsstellung muss ausgewählt werden.
The user selects the rate list button and the bill-to account has no rate plans	No rates found.	Keine Tarife gefunden.
The user selects the rate list button and the rate plan selected has no rates	No rates found.	Keine Tarife gefunden.

## 6.18 Not On File Screen

Event	Message	Translation German
If data is entered into any of the following fields, the rest of the fields are required. The fields are: Name, Address, Zip, Phone, City, State, and Contact Last Name and/or Contact First Name.	"Field Name" must be entered.  (NOTE: Each field that is not entered will be displayed and have its own error message)	"Field Name" muss eingegeben werden.  (HINWEIS: Jedes Feld ohne Angabe wird mit einer eigenen Fehlermeldung angezeigt.)

## 6.19 Vehicle/Shop

Event	Message	Translation German
User enters a date of loss that is after the current date.	Date of Loss must be equal to or prior to today's date.	Der Schadenstag muss dem heutigen Datum entsprechen oder davor liegen.

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6.20 Notes

Event	Message	Translation German
User attempts to accept a note with no text entered.	Text must be entered.	Texteingabe erforderlich.

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## Supplemental Specification: Hot Keys

Version 1.1

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Supplementary Specification	Date: <dd/mmm/yy>
<document identifier>	

## Revision History

Date	Version	Description	Author
8/22/01	1.0	First Draft	Mike Pallia
10/25/01	1.1	Added Germany hot key values	M. Pallia

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## Supplemental Specification

### 1. Hot Keys

The purpose of this document is to identify every hot key within each screen of a Reservation

#### 1.1 US English Screens

##### 1.1.1 Detail Screen

The reservation detail screen is used to determine what reservations will be coming in for a specific day. The user will refresh this list frequently to keep it updated.

Pickup Date	Pickup Time	Renter Name	Pickup Method	Pickup Location	Car Class	Preference	Reservation Type
5/9		Washington, George	DEL	Front step of City Hall.	LCAR		Corporate
5/9	9:30 AM	Attebarro, James	W/IN		SCAR001		Retail
5/9	8:45 AM	Shuffitelli, Joe	P/UP	Home	ECAR	Something with 4 wheels and an engine that won't leak oil.	Insurance
5/9	9:45 AM	Zukow, Thomas	DEL/R	Service garage for Lou Fusz Dodge		Dodge Viper with tow package installed	Dealership
5/9	10:30 AM	Antilles, Wedge	W/IN		XCAR		Corporate
5/9	12:00 PM	Solo, Hans			XCAR	Anything that can make the Kessel Run	Retail
5/9	12:15 PM	Graves, Paul	CWC		ICAR	V6 engine	Insurance
5/9	1:20 PM	Jones, Christopher	P/UP	County Jail		No bars in windows	Government
5/9	1:20 PM	Smith, Chris	W/IN		CCAR		Retail
		NoDate, NoTime	W/IN				Retail

The Hot Keys that apply to this screen are:

Text Label	North America	Germany	Purpose of button
<u>Refresh</u>	<u>F</u>	K	Re-submits the page to get the most current data
<u>Print List</u>	<u>P</u>	D	Prints all the records in the summary list
<u>Edit</u>	<u>E</u>	B	Is in regard to changing an existing reservation
<u>Detail</u>	<u>D</u>	A	Navigates the user to the Reservation Detail Screen
<u>Summary</u>	<u>U</u>	Z	Navigates the user to the Reservation Summary Screen



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<u>Forecasting</u>	<u>O</u>	O	Navigates the user to the Reservation Forecasting screen
		N	
<u>Search</u>	<u>S</u>	S	Navigates the user to the Reservation Search Screen
<u>New Reservation</u>	<u>W</u>	U	This button is used when a user wants to create a new reservation for a potential customer.
<u>Transaction 1</u>	<u>1</u>	1	Navigates the user to the first open transaction
<u>Transaction 2</u>	<u>2</u>	2	Navigates the user to the second open transaction
<u>Transaction 3</u>	<u>3</u>	3	Navigates the user to the third open transaction

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### 1.1.2 Summary Screen

The Reservation summary screen is used to determine how many reservations are coming into the branch during a specific ½ hour period for a specific day.

Pickup Time	Reservations	Pickup Method						Car Class
		W/IN	P/UP	DEL	CWC	DEL/R		
No Time	5							
12:00 AM								
12:30 AM								
1:00 AM								
1:30 AM								
2:00 AM								
2:30 AM								
3:00 AM								
3:30 AM								
4:00 AM								
4:30 AM								
5:00 AM								
5:30 AM								
6:00 AM								
No Date	20							

The Hot Keys that apply to this screen are :

Text Label	North America	Germany	Purpose of button
<u>Refresh</u>	<u>F</u>	K	Re-submits the page to get the most current data
<u>Print Summary</u>	<u>P</u>	D	Prints the entire day of ½ hour intervals because all the ½ hour intervals may not be visible on the screen
<u>Detail</u>	<u>D</u>	A	Navigates the user to the Reservation Detail Screen
<u>Summary</u>	<u>U</u>	Z	Navigates the user to the Reservation Summary Screen
<u>Forecasting</u>	<u>O</u>	O	Navigates the user to the Reservation Forecasting screen
		N	
<u>Search</u>	<u>S</u>	S	Navigates the user to the Reservation Search Screen
<u>New Reservation</u>	<u>W</u>	U	This button is used when a user wants to

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			create a new reservation for a potential customer.
<u>Transaction 1</u>	<u>1</u>	1	Navigates the user to the first open transaction
<u>Transaction 2</u>	<u>2</u>	2	Navigates the user to the second open transaction
<u>Transaction 3</u>	<u>3</u>	3	Navigates the user to the third open transaction

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### 1.1.3 Forecasting Screen

The Reservation forecasting screen is used to determine how many reservations are booked for a particular day within a 14-day period.

Reservation Forecasting - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Reservation Contract Callbacks

Detail Summary **Forecasting** Notification Search

Reservation Forecasting Starting on: 5/13/2001 (MM/DD/YYYY)

Group: 01 - St. Louis Branch: The First Branch

May 25, 2001 through June 7, 2001

Previous 14 Days Next 14 Days

Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday
May 25	May 26	May 27	May 28	May 29	May 30	May 31
12	5		25	27	18	15
June 1	June 2	June 3	June 4	June 5	June 6	June 7
13	4		32	18	17	16

Refresh New Reservation

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The Hot Keys that are available to the user are:

Text label	North America	Germany	Purpose of button
<u>Refresh</u>	<u>E</u>	K	Re-submits the page to get the most current data
<u>Detail</u>	<u>D</u>	A	Navigates the user to the Reservation Detail Screen
<u>Summary</u>	<u>U</u>	Z	Navigates the user to the Reservation Summary Screen
<u>Forecasting</u>	<u>O</u>	O	Navigates the user to the Reservation Forecasting screen
		N	
<u>Search</u>	<u>S</u>	S	Navigates the user to the Reservation Search Screen
<u>New Reservation</u>	<u>W</u>	U	This button is used when a user wants to create a new reservation for a potential customer.
<u>Transaction 1</u>	1	1	Navigates the user to the first open

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			transaction
<u>Transaction 2</u>	<u>2</u>	2	Navigates the user to the second open transaction
<u>Transaction 3</u>	<u>3</u>	3	Navigates the user to the third open transaction

#### 1.1.4 Notification Screen

The Reservation Notification screen is used to show the user the reservations that need to be confirmed immediately.

Pick-up Date	Pick-up time	Renter Name	Bill-To Account Name	Date Reservation Created	Time Reservation Created	Reservation Number
<b>04/03/01</b>	8:30 AM	<u>Attiberry, James</u>	Honest Bob's Collision Repair and Gun Store	02/28/01	11:35 AM	123456
<b>04/10/01</b>	8:30 AM	<u>Snuffitelli, Jon</u>	Firestone	02/27/01	2:31 PM	234567
<b>04/10/01</b>	9:45 AM	<u>Smart, Maxwell</u>	Classified	03/05/01	7:30 AM	345678
		<u>Johnston, Christine</u>	Carl's Auto	04/29/01	3:15 PM	BC43W2
04/01/01	6:45 AM	<u>Dee, Jane</u>	Fleecem Insurance	04/01/01	6:40 AM	456789
04/02/01		<u>Yeaser, Chuck</u>	USAF	04/02/01	1:23 PM	MACH01
04/02/01	1:45 PM	<u>Lobachevski, Steven</u>	No Problem Coverage	04/02/01	12:00 PM	567890
04/03/01	2:30 PM	<u>Allen, Roger</u>	Pooh Insurance	04/03/01	11:30 AM	D54Q87

Reservations in **Bold** are a priority.

Total number of reservations: 10

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The hot keys that are available to the user are:

Text label	North America	Germany	Purpose of button
<u>Refresh</u>	<u>E</u>	K	Re-submits the page to get the most current data
<u>Detail I</u>	<u>D</u>	A	Navigates the user to the Reservation Detail Screen
<u>Summary</u>	<u>U</u>	Z	Navigates the user to the Reservation Summary Screen
<u>Forecasting</u>	<u>O</u>	O	Navigates the user to the Reservation Forecasting screen
		N	

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<u>Search</u>	<u>S</u>	S	Navigates the user to the Reservation Search Screen
<u>New Reservation</u>	<u>W</u>	U	This button is used when a user wants to create a new reservation for a potential customer.
<u>Transaction 1</u>	<u>1</u>	1	Navigates the user to the first open transaction
<u>Transaction 2</u>	<u>2</u>	2	Navigates the user to the second open transaction
<u>Transaction 3</u>	<u>3</u>	3	Navigates the user to the third open transaction

### 1.1.5 Search Screen

The search screen allows the user to locate a specific reservation by entering specific criteria.

Reservation Search Criteria - Basic - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

Group: 01 - St. Louis Branch: The First Branch Advanced Search

Renter Last Name: Renter First Name: Renter Telephone Number: Reservation Number:

Search Reset

GP/RR	Pickup Date	Pickup Time	Renter Name	Pickup Method	Car Class	Reservation Type	Reservation Number
1022	02/28/01	8:30 AM	Smith, Roger	Pick-Up	MVAR	Retail	103453
1022	03/01/01	8:00 AM	Tucker, James	Pick-Up	ECAR	Insurance	103029
1022	03/01/01	11:00 AM	Smith, Robert	Walk-In	FCAR	Fleet	Q345T1

Print Current Page Print All Records New Reservation

Items 1 - 10 of 50 found Prev 1 2 3 4 5 Next

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The Hot Keys that are available to the user are:

Text label	North America	Germany	Purpose of Button
<u>Reset</u>	E	Ü	Clears the data out of all the fields
<u>Print Current Page</u>	I	T	Since a search can return more than 1 page of results, this will print only the current page that is displayed to the user

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<u>Print List</u>	<u>P</u>	D	Prints all the records found regardless of the number of pages
<u>Detail</u>	<u>D</u>	A	Navigates the user to the Reservation Detail Screen
<u>Summary</u>	<u>U</u>	Z	Navigates the user to the Reservation Summary Screen
<u>Forecasting</u>	<u>O</u>	O	Navigates the user to the Reservation Forecasting screen
		N	
<u>Search</u>	<u>S</u>	S	Navigates the user to the Reservation Search Screen
<u>New Reservation</u>	<u>W</u>	U	This button is used when a user wants to create a new reservation for a potential customer.
<u>Transaction 1</u>	<u>1</u>	1	Navigates the user to the first open transaction
<u>Transaction 2</u>	<u>2</u>	2	Navigates the user to the second open transaction
<u>Transaction 3</u>	<u>3</u>	3	Navigates the user to the third open transaction

#### 1.1.6 Driver Search Screen

This screen is used to find a repeat renter's information to add to a reservation transaction. The user searches by the criteria listed and will pick one of the repeat renters returned from the search. If the user does not find the renter they are looking for, they will use the New Driver button to start a reservation without any renter information pre-filled.

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E3846G 0101 Enterprise ECARS Application - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

Reservation Tickets Callbacks Vehicle Tools Help F1

**DRIVERS** Driver Search

Additional Drivers: 1

Phone Number Last Name: First Name:

**REFERRAL** License Number: Date of Birth:

**DATES/RATES** Search Reset New Driver

**BILL-TO** Name Address: Phone Number Date of Birth:

**VEHICLE/SHOP**

**NOTES** Notes Taken : 2

Res -10BS25

The Hot keys available to the user are :

Text label	North America	Germany	Purpose of Button
<u>Reset</u>	<u>E</u>	<u>Ü</u>	Clears the data out of all the fields
<u>Drivers</u>	<u>D</u>	<u>A</u>	Navigates the user to the Driver screen
<u>Referral</u>	<u>R</u>	<u>W</u>	Navigates the user to the Referral screen
<u>Dates/Rates</u>	<u>I</u>	<u>P</u>	Navigates the user to the Dates/Rates screen
<u>Bill-to</u>	<u>B</u>	<u>R</u>	Navigates the user to the Bill-to screen
<u>Vehicle/Shop</u>	<u>H</u>	<u>F</u>	Navigates the user to the Vehicle/Shop screen
<u>Notes</u>	<u>O</u>	<u>O</u>	Navigates the user to the Notes screen
<u>New Driver</u>	<u>W</u>	<u>U</u>	Navigates the user to the Drivers screen with no renter data populated
<u>Transaction 1</u>	<u>1</u>	<u>1</u>	Navigates the user to the first open transaction
<u>Transaction 2</u>	<u>2</u>	<u>2</u>	Navigates the user to the second open transaction
<u>Transaction 3</u>	<u>3</u>	<u>3</u>	Navigates the user to the third open transaction



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### 1.1.7 Driver Screen

This screen is used to fill in all the data about a renter. The user can enter more than one renter. When the user needs to add an additional driver to a reservation, they will use the "Add'l drivers" button to create another instance of the driver screens.

The Hot Keys available to the user are:

Text label	North America	Germany	Purpose of Button
<u>Add'l Drivers</u>	<u>A</u>	E	Used to add more than one driver to a reservation
<u>Update</u>	<u>U</u>	Ä	If the user has to update a Repeat renter's data.
<u>Clear</u>	<u>L</u>	L	Used to clear all the driver data fields at once.
<u>Drivers</u>	<u>D</u>	A	Navigates the user to the Driver screen
<u>Referral</u>	<u>R</u>	W	Navigates the user to the Referral screen
<u>Dates/Rates</u>	<u>I</u>	P	Navigates the user to the Dates/Rates screen
<u>Bill-to</u>	<u>B</u>	R	Navigates the user to the Bill-to screen
<u>Vehicle/Shop</u>	<u>H</u>	F	Navigates the user to the Vehicle/Shop screen

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<u>Notes</u>	<u>O</u>	O	Navigates the user to the Notes screen
<u>Next</u>	<u>N</u>	B	Navigates the user to the next main area within the transaction navigation bar
<u>Complete</u>	<u>C</u>	G	Saves the transaction
<u>Exit "X"</u>	<u>X</u>	X	This is used to exit the transaction that the user is working on. No data will be saved from the point when the user last saved.
<u>Driver</u>	<u>I</u>	H	Navigates the user to the Driver screen when the user might be working on more than one driver
<u>Other Address</u>	<u>E</u>	A	Navigates the user to the Other Address screen for the current driver (if more than one)
<u>Cash Qualification</u>	<u>Q</u>	U	Navigates the user to the cash qualification screen for the current driver (if more than one)
<u>Insurance Detail</u>	<u>S</u>	S	Navigates the user to the Insurance Detail screen for the current driver (if more than one)
<u>Transaction 1</u>	<u>1</u>	1	Navigates the user to the first open transaction
<u>Transaction 2</u>	<u>2</u>	2	Navigates the user to the second open transaction
<u>Transaction 3</u>	<u>3</u>	3	Navigates the user to the third open transaction

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### 1.1.8 Other Address, Cash Qualification, Insurance Detail Sub-Screens

These screens are used to capture additional data about a Driver. The other address allows the user to enter a second address for a renter. The cash qualification screen provides additional data areas to underwrite a driver that may not have a credit card. The insurance detail screen provides an area for the user to capture the details of the Driver's Personal Car Insurance.

The Hot Keys available to the user on each of the sub-screens are:

Text label	North America	Germany	Purpose of Button
<u>Drivers</u>	D	A	Navigates the user to the Driver screen
<u>Referral</u>	R	W	Navigates the user to the Referral screen
<u>Dates/Rates</u>	I	P	Navigates the user to the Dates/Rates screen
<u>Bill-to</u>	B	R	Navigates the user to the Bill-to screen
<u>Vehicle/Shop</u>	H	F	Navigates the user to the Vehicle/Shop screen
<u>Notes</u>	O	O	Navigates the user to the Notes screen
<u>Back</u>	B	K	Navigates the user back to the Driver Screen for the current driver (if there are more than one)
<u>Complete</u>	C	G	Saves the transaction

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<u>Exit "X"</u>	<u>X</u>	X	This is used to exit the transaction that the user is working on. No data will be saved from the point when the user last saved.
<u>Driver</u>	<u>I</u>	H	Navigates the user to the Driver screen when the user might be working on more than one driver
<u>Other Address</u>	<u>E</u>	A	Navigates the user to the Other Address screen for the current driver (if more than one)
<u>Cash Qualification</u>	<u>Q</u>	Ü	Navigates the user to the cash qualification screen for the current driver (if more than one)
<u>Insurance Detail</u>	<u>S</u>	S	Navigates the user to the Insurance Detail screen for the current driver (if more than one)
<u>Transaction 1</u>	<u>1</u>	1	Navigates the user to the first open transaction
<u>Transaction 2</u>	<u>2</u>	2	Navigates the user to the second open transaction
<u>Transaction 3</u>	<u>3</u>	3	Navigates the user to the third open transaction

#### 1.1.9 Referral Screen

This screen is used to capture the data of who referred the renter to Enterprise. This can be either an Enterprise Account or Enterprise Employee.

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Referral - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

Referrals | Contracts | Callbacks

**DRIVERS**  
James Atteberry  
Additional Drivers: 2

**REFERRAL**  
Account Name  
Contact Name

**DATES/RATES**  
08/27/2001; ECAR  
Daily Rate; ASD

**BILL-TO**  
Account Name  
Contact Name

**VEHICLE/SHOP**  
1997 Dodge Avenger  
ES  
Shop Account Name

**NOTES**  
Notes Taken: 1  
Changed:  
08/27/2001

**Referral Source**

Referral

☒ Account  
Account Name: [Select] Account Number: [ ]  
Contact Name: [Select] Contact Phone Ext: [ ] [New Contact] [ ]

☐ Employee  
[ ]

[Search]

**Referral Detail**

Bavarian, Inc	Account Number:	G08799
8374 Olive	Account Type:	Corporate
Address line 2		
St. Louis, MO 63132	Owning Gp/Br:	0101

[Previous] [Next] [Cancel]

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The Hot Keys available to the user are:

Text label	North America	Germany	Purpose of Button
<u>S</u> earch	<u>S</u>	S	Navigates the user to the account or employee search screen
<u>D</u> rivers	<u>D</u>	A	Navigates the user to the Driver screen
<u>R</u> eferral	<u>R</u>	W	Navigates the user to the Referral screen
<u>D</u> ates/Rates	<u>I</u>	P	Navigates the user to the Dates/Rates screen
<u>B</u> ill-to	<u>B</u>	R	Navigates the user to the Bill-to screen
<u>V</u> ehicle/Shop	<u>H</u>	F	Navigates the user to the Vehicle/Shop screen
<u>N</u> otes	<u>O</u>	O	Navigates the user to the Notes screen
<u>P</u> revious	<u>V</u>	V	Navigates the user to the previous main area within the transaction navigation bar
<u>N</u> ext	<u>N</u>	N	Navigates the user to the next main area within the transaction navigation bar

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<u>Complete</u>	<u>C</u>	G	Saves the transaction
<u>Exit "X"</u>	<u>X</u>	X	This is used to exit the transaction that the user is working on. No data will be saved from the point when the user last saved.
<u>Transaction 1</u>	<u>1</u>	1	Navigates the user to the first open transaction
<u>Transaction 2</u>	<u>2</u>	2	Navigates the user to the second open transaction
<u>Transaction 3</u>	<u>3</u>	3	Navigates the user to the third open transaction

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<document identifier>	

### 1.1.10 Dates/Rates Screen

This screen is used to capture all the particulars of a reservation. This includes Pick-up date, Return Date and allows the user to search for a rental rate for the reservation. This screen handles any additional product or fees that are associated to the rate or pick-up location.

The screen shot is broken into two shots because of the screen scrolls vertically.

**Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car**

Navigation: Reservation | Contracts | Fallbacks

**DRIVERS**

- Driver summary 1
- Driver summary 2

**REFERRAL**

- Referral sum 1
- Referral sum 2

**DATES/RATES**

- Dates summary 1
- Dates summary 2

**BILL-TO**

- Bill-To summary 1
- Bill-To summary 2

**VEHICLE/SHOP**

- Vehicle/Shop 1
- Vehicle/Shop 2

**NOTES**

- Notes summary 1
- Notes summary 2

**Rates/Dates** [Options] [Go]

Pickup Date: [MM/DD/YYYY] Time: [HH:MM A] Return Date: [MM/DD/YYYY] Time: [HH:MM A]

Method: [ ] Location: [ ] Method: [ ] Location: [ ]

[Directions]

Rate Source: [ ] Account Name: [ ] Account Number: [ ] Rental Type: [ ]

Rate Plan: [ ] Car Class: [ ] [Search] [Get Price]

**Rates**

Daily		Weekly		Monthly		Hourly		Mileage Charge	No. Charge
Rate	Mileage	Rate	Mileage	Rate	Mileage	Rate	Mileage		
15.99	150	59.99	750	179.99	1500	5.99	0.15		<input type="checkbox"/>

[Billing Cycle] [Vehicle Preference]

[Previous] [Next] [Complete]

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Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Reservation Contract

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Rates/Dates** - Options -

Account Details

Hot Line number 1  
Hot Line number 2

Discounts and Specials

☒ Add A Special

Start Date Start Time End Date End Time

MM/DD/YYYY HH:MM A MM/DD/YYYY HH:MM A

Rate

Type	Rate	Mileage	No Charge
Per Day Special			<input type="checkbox"/>

☐ Add A Discount

%

Previous Next

Res - 411781 Tkt - 234567 Cbk - 363221

The hot keys available to the user are:

Text label	North America	Germany	Purpose of Button
<u>S</u> earch	<u>S</u>	S	Navigates the user to the Account search screen
<u>D</u> irections	<u>E</u>	B	Allows the user to enter directions to the pick-up location
<u>G</u> et Rates	<u>G</u>	Z	Tells the system to go look for any rental car rates that are set up for the Account chosen as the rate source.
<u>V</u> LF	<u>L</u>	I	Displays the table of Vehicle License fees. VLF is a tax that is applied to rentals in the states of California and Hawaii only.
<u>M</u> ore	<u>M</u>	M	Navigates the user to a screen that displays all the rate source account's information.
<u>D</u> rivers	<u>D</u>	A	Navigates the user to the Driver screen
<u>R</u> eferral	<u>R</u>	W	Navigates the user to the Referral screen
<u>D</u> ates/Rates	<u>I</u>	P	Navigates the user to the Dates/Rates screen
<u>B</u> ill-to	<u>B</u>	R	Navigates the user to the Bill-to screen



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<document identifier>	

<u>Vehicle/Shop</u>	<u>H</u>	F	Navigates the user to the Vehicle/Shop screen
<u>Notes</u>	<u>O</u>	O	Navigates the user to the Notes screen
<u>Previous</u>	<u>V</u>	V	Navigates the user to the previous main area within the transaction navigation bar
<u>Next</u>	<u>N</u>	N	Navigates the user to the next main area within the transaction navigation bar
<u>Complete</u>	<u>C</u>	G	Saves the transaction
<u>Exit "X"</u>	<u>X</u>	X	This is used to exit the transaction that the user is working on. No data will be saved from the point when the user last saved.
<u>Transaction 1</u>	<u>1</u>	1	Navigates the user to the first open transaction
<u>Transaction 2</u>	<u>2</u>	2	Navigates the user to the second open transaction
<u>Transaction 3</u>	<u>3</u>	3	Navigates the user to the third open transaction

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### 1.1.11 Bill-to Screen

This screen is used to capture the information about an account that is authorizing Enterprise to bill them for some portion or the entire rental.

The hot keys available to the user are:

Text label	North America	Germany	Purpose of Button
<u>S</u> earch	<u>S</u>	S	Navigates the user to the Account Search screen
<u>N</u> ot On File	<u>F</u>	D	Allows the user to create a new bill-to account if the account cannot be located in the account database.
<u>R</u> ate List	<u>L</u>	L	Shows the rates of the account that is selected as the Bill-to
<u>D</u> rivers	<u>D</u>	A	Navigates the user to the Driver screen
<u>R</u> eferral	<u>R</u>	W	Navigates the user to the Referral screen
<u>D</u> ates/Rates	<u>I</u>	P	Navigates the user to the Dates/Rates

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			screen
<u>Bill-to</u>	<u>B</u>	R	Navigates the user to the Bill-to screen
<u>Vehicle/Shop</u>	<u>H</u>	F	Navigates the user to the Vehicle/Shop screen
<u>Notes</u>	<u>O</u>	O	Navigates the user to the Notes screen
<u>Previous</u>	<u>V</u>	V	Navigates the user to the previous main area within the transaction navigation bar
<u>Next</u>	<u>N</u>	N	Navigates the user to the next main area within the transaction navigation bar
<u>Complete</u>	<u>C</u>	G	Saves the transaction
<u>Exit "X"</u>	<u>X</u>	X	This is used to exit the transaction that the user is working on. No data will be saved from the point when the user last saved.
<u>Transaction 1</u>	<u>1</u>	1	Navigates the user to the first open transaction
<u>Transaction 2</u>	<u>2</u>	2	Navigates the user to the second open transaction
<u>Transaction 3</u>	<u>3</u>	3	Navigates the user to the third open transaction

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### 1.1.12 Vehicle/Shop Screen

This screen is used to capture data about the Renter personal vehicle and data about the shop that will be fixing it.

The hot keys available to the user are:

Text label	North America	Germany	Purpose of Button
<u>Search</u>	<u>S</u>	S	Navigates the user to the Account Search screen
<u>Not On File</u>	<u>F</u>	D	Allows the user to create a new bill-to account if the account cannot be located in the account database.
<u>Drivers</u>	<u>D</u>	A	Navigates the user to the Driver screen
<u>Referral</u>	<u>R</u>	W	Navigates the user to the Referral screen
<u>Dates/Rates</u>	<u>I</u>	P	Navigates the user to the Dates/Rates screen
<u>Bill-to</u>	<u>B</u>	R	Navigates the user to the Bill-to screen
<u>Vehicle/Shop</u>	<u>H</u>	F	Navigates the user to the Vehicle/Shop screen
<u>Notes</u>	<u>O</u>	O	Navigates the user to the Notes screen
<u>Previous</u>	<u>V</u>	V	Navigates the user to the previous main area within the transaction navigation bar

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<u>Next</u>	<u>N</u>	N	Navigates the user to the next main area within the transaction navigation bar
<u>Complete</u>	<u>C</u>	G	Saves the transaction
<u>Exit "X"</u>	<u>X</u>	X	This is used to exit the transaction that the user is working on. No data will be saved from the point when the user last saved.
<u>Transaction 1</u>	<u>1</u>	1	Navigates the user to the first open transaction
<u>Transaction 2</u>	<u>2</u>	2	Navigates the user to the second open transaction
<u>Transaction 3</u>	<u>3</u>	3	Navigates the user to the third open transaction

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### 1.1.13 Notes

This screen is used to log any miscellaneous information about a reservation that isn't captured on the other screens.

The hot keys available to the user are:

Text label	North America	Germany	Purpose of Button
<u>Print All Records</u>	<u>P</u>	<u>D</u>	Prints all notes that have been saved regardless of what is displayed on the screen
<u>Add Note</u>	<u>A</u>	<u>Z</u>	Allow the user to enter a text note.
<u>Drivers</u>	<u>D</u>	<u>A</u>	Navigates the user to the Driver screen
<u>Referral</u>	<u>R</u>	<u>W</u>	Navigates the user to the Referral screen
<u>Dates/Rates</u>	<u>I</u>	<u>P</u>	Navigates the user to the Dates/Rates screen
<u>Bill-to</u>	<u>B</u>	<u>R</u>	Navigates the user to the Bill-to screen
<u>Vehicle/Shop</u>	<u>H</u>	<u>F</u>	Navigates the user to the Vehicle/Shop screen
<u>Notes</u>	<u>O</u>	<u>O</u>	Navigates the user to the Notes

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			screen
<u>Previous</u>	<u>V</u>	V	Navigates the user to the previous main area within the transaction navigation bar
<u>Next</u>	<u>N</u>	N	Navigates the user to the next main area within the transaction navigation bar
<u>Complete</u>	<u>C</u>	G	Saves the transaction
<u>Exit "X"</u>	<u>X</u>	X	This is used to exit the transaction that the user is working on. No data will be saved from the point when the user last saved.
<u>Transaction 1</u>	<u>1</u>	1	Navigates the user to the first open transaction
<u>Transaction 2</u>	<u>2</u>	2	Navigates the user to the second open transaction
<u>Transaction 3</u>	<u>3</u>	3	Navigates the user to the third open transaction

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#### 1.1.14 Account/Employee Search

This screen is used when a specific account or employee needs to be located and used as a Referral, Bill-to, Rate Source or Shop.

Account Search - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Account Search

Group:  
01 - St. Louis

Account Name Account Phone Number Account Type  
All

Account Name	Account Number	Account Type	Driving CP/BR	Account Address	City	State	Zip	Phone Numbers
A Collector's Bookstore**	GE1658	Corporate	0101	6275 Delmar	St. Louis	MO	63130	(314) 721-6127
A.f.f. Remodeling Co.**	GE1225	Corporate	0102	312 Oak Pk. Village Dr.	Wildwood	MO	63040	(636) 458-1552
Accent Lincoln-mercury**	129498	Dealership	0103	9700 Manchester Rd	St. Louis	MO	63119	(314) 968-5300
Advantage Decorating**	GE0853	Corporate	0104	1601 North 7th St.	St. Louis	MO	63102	(314) 436-1419
African Amer. Rite Of Passage**	GE1938	Corporate	0105	325 Debaliviere	St. Louis	MO	63112	(314) 361-2268
Ahzad Bogesian**	GE0830	Corporate	0106	7743 Arthur	St. Louis	MO	63117	(314) 645-3076
Alg-cs**	GE0238	Corporate	0107	120 S Central, Ste 300	St. Louis	MO	63105	(000) 000-0000
Al-nac, Inc. **	GE1350	Corporate	0108	18535 Old Hwy 66	Pacific	MO	63069	(636) 271-

Print Current Page Print All Records

Items 1 - 66 of 66 found Prev 1 2 3 4 5 Next

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The hot keys available to the user are:

Text label	North America	Germany	Purpose of Button
Reset	E	Ü	Clears the data out of all the fields
Cancel	A	A	Returns the user to the screen where the user initiated the search
Transaction 1	1	1	Navigates the user to the first open transaction
Transaction 2	2	2	Navigates the user to the second open transaction
Transaction 3	3	3	Navigates the user to the third open transaction



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# **ECARS 2.0** **Supplemental Specification: Navigation and Screen Layout**

**Version 1.2**

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## Revision History

Date	Version	Description	Author
8/22/01	1.0	First Draft	Mike Pallia
8/24/01	1.1	Changes made after user review	Mike Pallia
8/27/01	1.2	More Changes from the User Review. This is the final version.	Mike Pallia

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## Supplemental Specification

### 1. Navigation and Screen Layout

The screens within the Transaction Sub-application of ECARS 2.0 were broken down into specific areas. Each area has a specific purpose and should be implemented as such throughout the rest of ECARS 2.0 to give the users a consistent look and feel for every part of the sub-application. This includes Hot Keys, Tabbing and Navigation areas within a Summary, Transaction or Search screen.

#### 1.1 Summary Screen Layout

These are the standards for the Summary screens. A Summary screen is often the home page for a particular sub-application. It allows the user to quickly gain useful information about that sub-application. Summary screens can be several screens linked together.

Pickup Date	Pickup Time	Renter Name	Pickup Method	Pickup Location	Car Class	Preference	Reservation Type
5/9		Washington, George	DEL	Front step of City Hall	LCAR		Corporate
5/9	8:30 AM	Atteberry, James	W/IN		SCAR001		Retail
5/9	8:45 AM	Snuffitelli, Joe	P/UP	Home	ECAR	Something with 4 wheels and an engine that won't leak oil.	Insurance
5/9	8:45 AM	Zukow, Thomas	DEL/R	Service garage for Lou Fusz Dodge		Dodge Viper with tow package installed	Dealership
5/9	10:30 AM	Antilles, Wedge	W/IN		XCAR		Corporate
5/9	12:00 PM	Solo, Hans			XCAR	Anything that can make the Kessel Run	Retail
5/9	12:15 PM	Graves, Paul	CWC		ICAR	V6 engine	Insurance
5/9	1:20 PM	Jones, Christopher	P/UP	County Jail		No bars in windows	Government
5/9	1:20 PM	Smith, Chris	W/IN		CCAR		Retail
		NoDate, NoTime	W/IN				Retail

Total number of reservations: 10

Refresh Print List New Reservation

Res - 411781 | Tkt - 234567 | Cbk - 363221 | Transaction Bar

#### 1.1.1 Menu Bar

The Menu Bar will be on all screens and is located at the top of page. The user will use the Menu Bar to navigate to different sub-applications (Reservation, Open Ticket, etc) within the ECARS 2.0 system. The options available within the Menu bar will be defined by the System Navigation Team and will not include any Sub-application specific functions such as Complete, Print, and Void.

#### 1.1.2 Summary Navigation Bar

The Summary Navigation bar is used to navigate through the different screens. For Reservation, the summary screens consist of Detail, Summary, Forecasting, Notification and Search. These links are included in the tabbing sequence and will not have a hot key associated to them. The Summary Navigation Bar should go just below the

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Menu bar and will easily distinguish which one of the screens the user is on.

### 1.1.3 Title Bar

All screens should have a title bar just below the Summary Navigation bar. This is used to textually tell the user what screen they are on .

### 1.1.4 Summary Information

The Summary Information section is where the summary information will go. All available remaining space is dedicated to this section. This section can include other navigation bars if the specific summary screen requires one. One specific navigational button that is included is the "New Reservation" button . This button will be available on every summary screen . The button will have a hot key and will be located just to the right of any other command buttons on the summary screen . When the user chooses this button, the system will open a new reservation transaction.

### 1.1.5 Transaction Bar

The current requirement limits the user to three open transactions within one session . The transactions can be in any state: open, closed, or reservation and will be distinguished to the user by displaying the transaction number . When the user is done working with or editing a transaction, the user is navigated to the home page of the Transaction that was closed . The Transaction Bar will appear on all screens and located at the bottom left hand most part of the screen. Nothing else should be to the right of the Transaction Bar to allow for the maximum number of transactions to be listed . The user can move back and forth from transaction to transaction using alt 1, alt 2 or alt 3.

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## 1.2 Transaction Screen Layout

These are the standards for a Transaction screen. A Transaction screen is one that is directly involved in gathering information for a transaction or displaying that information.

### 1.2.1 Menu Bar

The Menu Bar will be on all screens and is located at the top of page. The user will use the Menu Bar to navigate to different sub-applications (Reservation, Open Ticket, etc) within the ECARS 2.0 system. The options available within the Menu bar will be defined by the System Navigation Team and will not include any Sub-application specific functions such as Complete, Print, and Void.

### 1.2.2 Transaction Bar

The current requirement limits the user to three open transactions within one session. The transactions can be in any state: open, closed, or reservation and will be distinguished to the user by displaying the transaction number. When the user is done working with or editing a transaction, the user is navigated to the home page of the Transaction that was closed. The Transaction Bar will appear on all screens and located at the bottom of the screen. Nothing else should be to the right of the Transaction Bar to allow for the maximum number of transactions to be listed. The user can move back and forth from transaction to transaction using alt 1, alt 2 or alt 3.

### 1.2.3 Transaction Navigation Bar

The Transaction Navigation Bar is used to navigate through the main screens of a transaction. The Transaction Navigation Bar will not scroll vertically or horizontally. Each main area within the transaction is broken down within the Navigation bar. Within each of these areas, the

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system can display a maximum of 2 lines of text . If there is a situation where the text exceeds the display area, the system will truncate any extra data that exceeds the end of each line (no text wrapping) . The user will have the ability to view all the data within the area by the use of hover text.

The data that will display in each main area are the following :

Screen	Data
<u>Driver</u>	<u>Line 1 – Driver (First Name Last Name)</u> <u>Line 2 – Total number of Additional Drivers. For example “Additional Drivers 1”</u>
<u>Referral</u>	<u>Line 1 – Referral Account Name</u> <u>Line 2 – Referral Contact Name (First Name Last Name)</u>
<u>Bill-To</u>	<u>Line 1 – Bill -To Account Name</u> <u>Line 2 – Bill – to Contact Name (First Name Last Name)</u>
<u>Dates/Rates</u>	<u>Line 1 – Pick-up Date + Vehicle Class</u> <u>Line 2 – Daily Rate + any letter codes**</u>
<u>Vehicle/Shop</u>	<u>Line 1 – Year, Make and Model of the Renter’s Vehicle</u> <u>Line 2 –Shop Account Name</u>
<u>Notes</u>	<u>Line 1 – Total number of notes recorded for the transaction.</u> <u>Line 2 – Last Modified Date</u>

Note: This table will be revisited again during Callbacks.

\*\*A letter code will be displayed in the line 2 of the summary area of Rates/Dates when any of the following events occur.

- If any additional products are added to the reservation, an “A” will be displayed after the daily rate.
- If a discount is added to a reservation, a “D” will be displayed after the daily rate.
- If a special is added to a reservation, an “S” will be displayed after the daily rate.

The Transaction Navigation Bar starts at the left edge of the screen, and 25 pixels from the top. It is 125 pixels wide, with the attributes defined in the Rental.css style sheet.

The Transaction Navigation Bar should be used whenever a transaction has more than one main screen. Most search and summary screens will not have a Navigation Bar.

#### 1.2.4 Title Bar

All screens should have a title bar just below the Menu bar . This is used to tell the user what screen they are on. It will also contain a Select box with various commands in it , a Go button and a Close button (with an ‘X’ for the label) . The command box should default to “—Options —” . The command selected will only be executed after the Go button is pressed. The Close button will be available on every screen within the sub-application and will close the Transaction that the user is working on . When the user selects the “X”, the system will prompt the user that they are closing the transaction and no data will be saved . The system then waits for the user to confirm before closing the transaction.

Currently, the functions that will be available for pilot reservation in the command box will be Void and Print . Void will only appear in the command box once the transaction is completed and opened for editing.

The Title should use the PageHeader style, and be in mixed case.

#### 1.2.5 Screen Tab Bar

The Screen Tab Bar is used when there are multiple instances of the same data (i.e. multiple drivers on the same reservation). It visually indicates to the user how many copies there are, which copy they are working with and

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gives a brief description of each tab.

For an additional driver, the Last Name, First Name is displayed in the tab area . For each Bill-to, the tab will display the Bill Account Name in the tab area.

The Screen Tab Bar should be placed just below the Title Bar for the screen, and can extend the length of the screen . The background color for the selected tab is green, with white lettering, while the unselected tabs have a white background and black letters . These attributes are defined in the Rental.css style sheet.

#### 1.2.6 Screen Navigation Bar

The Screen Navigation Bar is used when a main screen has one or more sub screens. It consists of a series of buttons from left to right.. The name of the sub screen should be appended to the Title Bar . There should be no changes to the Screen navigation bar when the user navigates to a sub-screen. The sub-screens can also be navigated with hot keys.

All of the sub screens are displayed as buttons just below the Screen Tab Bar . If there is no Screen Tab Bar, the Screen Navigation Bar should be placed just below the Title Bar.

#### 1.2.7 Transaction Command Bar

The Transaction Command Bar is where the navigation and action buttons for a transaction are placed. When the user is on a main screen, the buttons that appear are Previous, Next and Complete . On a sub-screen, this will be Back and Complete . Back will return the user to the main screen . The only way the user will be able to save a transaction is to use the "Complete" button that is located on every screen.

When a user chooses to complete a transaction, the system will display a confirmation the transaction was save successfully and the system will return the user to the sub-application home screen.

The Transaction Command Bar should be placed just above the Transaction Bar, and to the right of the Navigation Bar. It extends all the way to the left .

#### 1.2.8 Main Screen

The Main Screen uses all remaining space. This is where the actual content should go for the screen. There should never be a horizontal scroll bar, but a vertical scroll bar is acceptable for the main screen . Within the screens, all the pop-up/dialog boxes should act the same way . The standards for dialog boxes/pop-ups are the following:

Dialog and pop-up boxes will behave dependant on the function of the box .

- If the box is display only, a close button will be available
- If the box has input criteria, an "OK" and "Cancel" button will be available
- If the box has only links, a "Cancel" button will be available
- No hot keys will be available for the action buttons (i.e. Ok, Close, Cancel)
- All boxes will have an "X" in the corner that closes box.
- The box will close if the user clicks outside of the box.
- Each dialog/pop-up will have a default Ok or Cancel that will fire when the user hits enter. This will occur on all dialog/pop-up boxes except for when the following occurs:
  - a. The entry field of the search criteria requires the use of more than one line. (ie: an address field)
  - b. There is validation on the criteria that is being entered. (ie. More that one criterion must be entered. A last name and a first name must be entered etc.)

An example of a default Ok would be when a user is adding a new contact. As soon as the user enters data into any of the fields and hits enter, the dialog/pop-up will fire the Ok button automatically. Default Cancel will be used whenever a user tries to exit the sub--application or needs to confirm an action.



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### 1.3 Summary Search Screen Layout

These are the standards for a Search screen that is used to locate a specific transaction.

Reservation Search Criteria - Advanced - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

Reservation | Contracts | Menu Bar | Callbacks

Detail | Summary | Forecasting | Notification | Search | Summary Navigation Bar

Reservation Search

Group: 01 - St. Louis Branch: The First Branch Search Filters Simple Search

Renter Last Name: Renter First Name: Renter Telephone Number: Reservation Number:

Bill-To and Shop Customers

Account Name: Customer Number: Claim/Policy/P.O. Number: Search Criteria

Pickup Date From: To: Date Reservation Taken: Renter's License Plate:

(MM/DD/YYYY) (MM/DD/YYYY) (MM/DD/YYYY)

Search Buttons

CP/BR	Pickup Date	Pickup Time	Renter Name	Pickup Method	Car Class	Reservation Type	Reservation Number
1022	02/28/01	8:30 AM	Smith, Roger	Pick-Up	MVAR	Retail	103453
1022	03/01/01	8:00 AM	Tucker, James	Pick-Up	ECAR	Insurance	103029
1022	03/01/01	11:00 AM	Smith, Robert	Walk-In	FCAR	Fleet	Q345T1
1022	03/05/01	8:00 AM	Verhoist, Laura	Deliver	ECAR		104439

Print Current Page Print All Records New Reservation

Search Results Navigation

Items 1 - 10 of 50 found Prev 1 2 3 4 5 Next

Res - 411781 Tkt - 234567 Cbk - 363221 Transaction Bar

#### 1.3.1 Menu Bar

The Menu Bar will be on all screens and is located at the top of page. The user will use the Menu Bar to navigate to different sub-applications (Reservation, Open Ticket, etc) within the ECARS 2.0 system. The options available within the Menu bar will be defined by the System Navigation Team and will not include any Sub-application specific functions such as Complete, Print, and Void.

#### 1.3.2 Transaction Bar

The current requirement limits the user to three open transactions within one session. The transactions can be in any state: open, closed, or reservation and will be distinguished to the user by displaying the transaction number. When the user is done working with or editing a transaction, the user is navigated to the home page of the Transaction that was closed. The Transaction Bar will appear on all screens and located at the bottom of the screen. Nothing else should be to the right of the Transaction Bar to allow for the maximum number of transactions to be listed. The user can move back and forth from transaction to transaction using alt 1, alt 2 or alt 3.

#### 1.3.3 Summary Navigation Bar

On the Transaction Search screens (Open Ticket, Reservation and Closed Ticket (not developed yet)), the user will have to use the Summary Navigation Bar to move between the screens. There will be no cancel or back button available to the user. The Summary Navigation bar is used to navigate through the different screens. For Reservation, the summary screens consist of Detail, Summary, Forecasting, Notification and Search. These buttons are included in the tabbing sequence. The Summary Navigation Bar should go just below the Menu bar.

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#### 1.3.4 Title Bar

All screens should have a title bar just below the Summary Navigation bar. This is used to tell the user what screen they are on. The Title should use the PageHeader style, and be in mixed case.

#### 1.3.5 Search Results Navigation

One specific navigational button that is included in this area is the "New Reservation" button . This button will be available on every summary screen . The button will have a hot key and will be located just to the right of any other command buttons on the summary search screen . When the user chooses this button, the system will open a new reservation transaction .

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#### 1.4 Transaction Search Screens

Within a transaction, there are a couple of search screens. These searches will navigate a little differently than the Summary Search Screens. Currently, the Transaction Searches are: Driver, Account, and Employee.

##### 1.4.1 Menu Bar

The Menu Bar will be on all screens and is located at the top of page. The user will use the Menu Bar to navigate to different sub-applications (Reservation, Open Ticket, etc) within the ECARS 2.0 system. The options available within the Menu bar will be defined by the System Navigation Team and will not include any Sub-application specific functions such as Complete, Print, and Void.

##### 1.4.2 Transaction Bar

The current requirement limits the user to three open transactions within one session. The transactions can be in any state: open, closed, or reservation and will be distinguished to the user by displaying the transaction number. When the user is done working with or editing a transaction, the user is navigated to the home page of the Transaction that was closed. The Transaction Bar will appear on all screens and located at the bottom of the screen. Nothing else should be to the right of the Transaction Bar to allow for the maximum number of transactions to be listed. The user can move back and forth from transaction to transaction using alt 1, alt 2 or alt 3.

##### 1.4.3 Title Bar

All screens should have a title bar just below the Menu bar. This is used to tell the user what screen they are on. It

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will also contain a Select box with various commands in it, a Go button and a Close button (with an 'X' for the label). The functions that will be available for pilot reservation in the command box will be Void and Print. Void will only appear in the command box once the transaction is completed and opened for editing. The command box should default to "Options --". The command selected will only be executed after the Go button is pressed. The Close button will be available on every screen within the sub-application and will close the Transaction that the user is working on. When the user selects the "X", the system will prompt the user that they are closing the transaction and no data will be saved. The system then waits for the user to confirm before closing the transaction.

The Title should use the PageHeader style, and be in mixed case.

#### 1.4.4 Transaction Command Bar

The Transaction Command Bar is where the navigation and action buttons for a transaction are placed. When the user is within a transaction search screen, the buttons that appear are Cancel and Complete. The Cancel button returns the user to the screen where the search was initiated. For Driver search, the business requirement is to have the text changed to "New Driver" rather than Cancel.

The Transaction Command Bar should be placed just above the Transaction Bar, and to the right of the Navigation Bar. It extends all the way to the left.

### 1.5 Tabbing

Tabbing will follow the requirements noted below.

- Tabbing will always go and left to right top to bottom within each defined area on the screen. (Unless a specific business requirement drives a modification)
- Summary screen tabbing will start at the first data entry field or button and will end with the screen command buttons on the bottom before the transaction bar. The next tab will be the Summary Navigation Bar. This tabbing sequence will not include the system menu or the transaction bar.
- Transaction tabbing will start at the first data entry field or button within the screen and will end at the complete button. The next tab takes the user to the upper most left hand field/button on the screen. It will not go to the system menu, the transaction navigation bar, or the transaction bar.
- The Transaction navigation bar and the transaction bar will be accessed via hot keys. When a hot key is used in these instances, the system will navigate to the specific functional area or will change transactions. Users will not be able to use the arrow keys for navigation within the navigation bar.

### 1.6 Hot Keys

Hot Keys within the sub-applications will be accessed by ALT + a letter or number. Hot Keys for the system will be accessed by CNTL + a letter or number. Once the sub-application is translated, the hot keys will be redefined to accommodate the translations.

The following standards were determined for the use of hot keys:

- Summary Screens
  - Hot keys will be on the buttons only.
- Transaction Screens
  - No hot keys will be set for the screen tab bar. They will be part of the tabbing sequence.
  - The Transaction Navigation Bar will have hot keys
  - The screen navigation bar will have hot keys
  - The open transactions in the Transaction Bar will be set to Alt 1, Alt 2, Alt 3, but will not be visually seen by the user.
- Dialog/ Pop-up boxes will not have hot keys on the action buttons. (i.e. Cancel, Ok, Close)

See Hot Keys Grid for the exact hot key layout for Pilot Reservation

### 1.7 Miscellaneous Notes

Below are some other notes regarding lay out that were driven out during the meetings:

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1. The Transaction Navigation bar must be blue. The Screen Tabs and the Transaction Bar are colored a different shade of green from the rest of the sub-app.
2. The Additional Driver button will be located in the screen tab area on the far right
3. Add new contact buttons will be relabeled "New Contact" and a new auth by will be relabeled "New Auth By".
4. Renter's Vehicle and Shop were combined to make one main screen called "Vehicle/Shop"

#### 1.8 Questions

- Do you want a new reservation button in the Res Summary Package?
  - Yes. On all screens
- Do you want to designate a home page for all the sub-applications? Our concern is that the maintenance programs will need a home page that is security based.
  - Each sub-application will determine this.
- When the user switches to another open transaction, where should the user's focus be?
  - The user should be returned to the same screen that was active when the user changed transactions.

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<Company Name>

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## ECARS 2.0 - Additional Drivers Screen Action Specification

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## Revision History

Date	Version	Description	Author
06/08/2001	1.0	Created Document	Johnny S. Johnston
6/15/2001	2.0	Revised for second panel review meeting	Johnny S. Johnston
6/20/2001	2.1	Revised after further clarification.	Johnny S. Johnston
7/13/01	2.2	Revised for developers changes	Johnny S. Johnston
8/30/2001	2.3	Update to reflect changes from Navigation use case.	James Atteberry
09/14/2001	2.4	Updated to add Delete button for additional driver.	James Atteberry
09/14/2001	2.5	Removed Primary Payment Method from screen.	James Atteberry
11/14/2001	2.6	Additional Driver Last Name validation was added	Jed Gaines

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## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Additional Drivers screen.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Additional Driver Screen

**AD Drivers - Microsoft Internet Explorer provided by Enterprise Rent-a-Car**

Reservations | Contracts | Call Us

**DRIVERS**  
James Atteberry  
Additional Drivers: 2

**REFERRAL**  
Account Name  
Contact Name

**DATES/RATES**  
08/27/2001; ECAR  
Daily Rate; ASD

**BILL-TO**  
Account Name  
Contact Name

**VEHICLE/SHOP**  
1997 Dodge Avenger  
Shop Account Name

**NOTES**  
Notes Taken: 1  
Changed:

**Drivers** [Options] [Go]

Atteberry, James | Smith, Chris | Cloud, Kevin | Add Drivers

Driver | Other Address | Insurance Detail | Cash Qualification

**Driver Name and Address**  
[Update] [Save] [Delete]

Last Name: Chris | First Name: Chris

Phone Numbers:  
Home: [ ] | Work: [ ] | Extension: [ ]  
Employer: [ ]  
Other Phone and Type: [ ]

Home Address:  
Same as Renter: ☐  
Address: [ ]  
ZIP: [ ] | Country: United States  
City: [ ] | State: [ ]

**Driver's License**

License Number: [ ] | Expiration Date: [ ] (MM/DD/YYYY)  
Issuing Country: United States | Issuing State: [ ]  
SSN: [ ] | DOB: [ ] (MM/DD/YYYY)  
Eye Color: [ ] | Height: [ ]  
Hair Color: [ ] | Weight: [ ]

[Previous] [Next] [Complete]

Res - 411781 | Tkt - 234567 | Cbk - 363221

Figure 1 – Additional Drivers Screen

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### 3. Reservation Number

#### 3.1 Behavior

This area shows the unique reservation number that has been assigned to the newly created reservation. The reservation number is 6 alphanumeric characters long. If another reservation is open, its reservation number will be displayed in this area as well. The user will have the ability to have up to 3 reservations open at a time. A hyperlink will be available on the reservation numbers of the reservations that are NOT currently being displayed. For the reservation that is currently displayed, the reservation number will not have a hyperlink available. This is to allow the user to navigate between the open reservations.

#### 3.2 Validation

None identified at this time.

#### 3.3 Business Exceptions

If the user tries to open a 4<sup>th</sup> reservation, the system will display a message stating, "A maximum of 3 reservations may be displayed".

#### 3.4 System Exceptions

None identified at this time.

### 4. Additional Driver Bar Area

#### 4.1 Behavior

The option area in the Additional Driver Title Bar will allow the user to access transaction-wide functions. These functions for Reservation are: -- Options --, Print, Void and Transfer . The default option is "-- Options --". The user must press the Go button to initiate the selected function.

The Title Bar Button area in the Additional Driver Title Bar contains two buttons – a Go button and a Close button.

The Go button is always active, and is used to initiate a function selected in the Option area .

The Close button is always active and is used to close the current transaction. The button is labeled with an 'X'. Pressing this button will cause a confirmation popup, asking the user if they wish to cancel the transaction and lose all changes. If the user selects 'No', they returned to the same screen. If the user selects 'Yes', the transaction is closed with no changes saved to the database.

#### 4.2 Validation

None identified at this time.

#### 4.3 Business Exceptions

None identified at this time.

#### 4.4 System Exceptions

None identified at this time.

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## 5. Button Line Area

### 5.1 Behavior

The Previous button will take the user to the notes screen within the same transaction.

The Next button will take the user to the Referral screen within the same transaction

The Complete button will initiate a save of the transaction. All validations will be performed, returning any errors to the user. If there are no errors, the transaction is saved, and the user is returned to the Reservation home page.

### 5.2 Validation

None identified at this time.

### 5.3 Business Validation

None identified at this time.

### 5.4 System Validation

None identified at this time.

## 6. Driver Navigation Area

### 6.1 Behavior

This area gives the user the ability to move to any screen within the Driver area. Each screen within the Driver area is connected by a hyperlink. The screens that have been defined are: Drivers, Other Address, Insurance Detail, and Cash Qualification. A hyperlink will NOT be available for the screen that is currently displayed.

### 6.2 Validation

None identified at this time.

### 6.3 Business Exceptions

None identified at this time.

### 6.4 System Exceptions

None identified at this time.

## 7. Update Button Function

### 7.1 Behavior

All information that is initially presented in this panel will be "read only". This button must be selected before the user can edit any of the information. If the user has selected this button and moves to a different panel, the panel will still be in the edit mode when the user returns to it. Similarly, if the button is not selected and the user moves to another panel, the panel will still be in the "read only" mode when the user returns to it.

### 7.2 Validation

None identified at this time.

### 7.3 Business Exceptions

The information areas on this panel will not be enabled for editing, if this button is not selected.

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## 7.4 System Exceptions

None identified at this time.

## 8. Clear Button Function

### 8.1 Behavior

All information that is initially presented in this panel will be "read only". If this button is selected, all if the information areas on the panel will be cleared and will be available for input. This will have the same functionality as adding a new driver to the reservation. If the user has selected this button and moves to a different panel, the panel will still be in the edit mode when the user returns to it. Similarly, if the button is not selected and the user moves to another panel, the panel will still be in the "read only" mode when the user returns to it.

### 8.2 Validation

None identified at this time.

### 8.3 Business Exceptions

None identified at this time.

### 8.4 System Exceptions

None identified at this time.

## 9. Delete Button Function

### 9.1 Behavior

When the Delete button is pressed, the user will be prompted to confirm the deletion of the additional driver ("Are you sure you wish to remove FIRST NAME LAST NAME from the reservation?"). If the request is confirmed, the additional driver is removed from the reservation. The user is then take to the main driver page of the main renter. If the request is cancelled, the user will start on the main driver page of the currently selected additional driver.

Note that the main driver is NOT considered an additional driver, and thus cannot be removed from the reservation.

### 9.2 Validation

The user must confirm that the delete request.

### 9.3 Business Exceptions

None identified at this time.

### 9.4 System Exceptions

None identified at this time.

## 10. Driver's Last and First Name

### 10.1 Behavior

This area is divided into two fields.

- Last Name
- First Name

Both fields are free form text fields and may contain alphanumeric values.

### 10.2 Validation

If the user attempts to exit the screen or complete the reservation, the last name field must have values

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entered. If there are not values in the last name field, the system will display a message "Last Name is required for a Reservation". \*\*\*See Error Message Spec

### 10.3 Business Exceptions

None identified at this time.

### 10.4 System Exceptions

None identified at this time.

## 11. Address Same as Driver Checkbox

### 11.1 Behavior

This checkbox will indicate if this additional driver should have the same address as the Renter. When the button is checked, the Address, Country, Zip, City and State fields are set to their default values (blank or the initial value if this is a select box). The fields are also disabled.

When the checkbox is unchecked, the fields are enabled for input.

### 11.2 Validation

None identified at this time.

### 11.3 Business Exceptions

If this button is selected, and there is not any address information in the first driver's address areas, a message is displayed "No Driver Address Information Available".

### 11.4 System Exceptions

None identified at this time.

## 12. Home Address Area

### 12.1 Behavior

This area is a free form alphanumeric area. This area is disabled if the Address Same as Driver check box has been selected.

### 12.2 Validation

None identified at this time.

### 12.3 Business Exceptions

None identified at this time.

### 12.4 System Exceptions

None identified at this time.

## 13. Zip Code, Country, City and State

### 13.1 Behavior

These behaviors are detailed out in the Geo-Framework Search Screen Spec. These areas are disabled if the Address Same as Driver check box has been selected.

### 13.2 Validation

None identified at this time.

### 13.3 Business Exceptions

None identified at this time.



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#### 13.4 System Exceptions

None identified at this time.

### 14. Home Phone Area

#### 14.1 Behavior

The Home Phone area is a free form text area that will allow the user to input alphanumeric values.

#### 14.2 Validation

None identified at this time.

#### 14.3 Business Exceptions

None identified at this time.

#### 14.4 System Exceptions

None identified at this time.

### 15. Work Phone Area

#### 15.1 Behavior

The Work Phone area is a free form text area that will allow the user to input alphanumeric values.

#### 15.2 Validation

None identified at this time.

#### 15.3 Business Exceptions

None identified at this time.

#### 15.4 System Exceptions

None identified at this time.

### 16. Phone Extension Area

#### 16.1 Behavior

The Phone Extension area is a free form text area that will allow the user to input alphanumeric values. This area would not be enabled until there was a value entered into the Work Phone area.

#### 16.2 Validation

There must be a value in the Work Phone area before this area is enabled.

#### 16.3 Business Exceptions

None identified at this time.

#### 16.4 System Exceptions

None identified at this time.

### 17. Employer Area

#### 17.1 Behavior

The Employer area is a free form text area that will allow the user to input alphanumeric values.

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## 17.2 Validation

None identified at this time.

## 17.3 Business Exceptions

None identified at this time.

## 17.4 System Exceptions

None identified at this time.

## 18. Other Phone Area

### 18.1 Behavior

The Other Phone area is a free form text area that will allow the user to input alphanumeric values.

### 18.2 Validation

None identified at this time.

### 18.3 Business Exceptions

None identified at this time.

### 18.4 System Exceptions

None identified at this time.

## 19. Phone Type Area

### 19.1 Behavior

This area will be a drop down area that will default to a blank. When the user clicks the drop down area, the system will display the domain of Phone Types available.

### 19.2 Validation

If there is a value entered in the Other Phone area, then a type other than blank must be selected.

### 19.3 Business Exceptions

If values exist within the Other Phone area, the system will also verify that a value, other than blank, has been selected from the drop down area Phone Type. If one has not been selected, the system displays a message "Phone Type must be selected".

### 19.4 System Exceptions

None identified at this time.

## 20. License Number

### 20.1 Behavior

This area will allow entry of alphanumeric values.

### 20.2 Validation

If values are entered into any one or combination of Expiration Date, State Issued and/or Date of Birth, then License Number is also required. The system will check which of these four areas contain or do not contain values and will present the user with a message stating which area(s) need to have a value. Example, if Expiration Date and State Issued contain values and Date of Birth and License Number do not, the system can display a message stating "Missing Information in:

- Date of Birth
- License Number"

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In this example the list would state that required information is missing for License number and Date of Birth, but it could be any combination of the four.

### 20.3 **Business Exceptions**

If values are entered into the License Number area then the Expiration Date, State Issued and Date of Birth areas become required.

### 20.4 **System Exceptions**

None identified at this time.

## 21. **Expiration Date**

### 21.1 **Behavior**

This will be a numeric field. It will not be formatted for presentation purposes. The user may enter delineating characters, but these will be stripped out before committing the data to the database. (As determined for all locale specific formatting.)

### 21.2 **Validation**

This date cannot be less than or equal to the current date. If it is a message is displayed stating, "Driver License Expiration Date is Invalid".

If values are entered into any one or combination of License Number, State Issued and/or Date of Birth, then Expiration Date is also required. The system will check which of these four areas contain or do not contain values and will present the user with a message stating which area(s) need to have a value. See example with License Number.

### 21.3 **Business Exceptions**

If values are entered into the Expiration Date then the License Number, State Issued and Date of Birth areas become required.

### 21.4 **System Exceptions**

None identified at this time.

## 22. **State Issued**

### 22.1 **Behavior**

This search criteria area will be a drop-down box. It should default to a blank. The users would also like to have the ability to type a character, alpha or numeric, into the criteria area and have the drop down list position to the character. (If the user enters an "H" the drop down list would position to the first state beginning with "H" in the list)

### 22.2 **Validation**

If values are entered into any one or combination of License Number, Expiration Date, and/or Date of Birth, then State Issued is also required. The system will check which of these four areas contain or do not contain values and will present the user with a message stating which area(s) need to have a value. See example with License

### 22.3 **Business Exceptions**

If a state is selected from this drop down area, then the Expiration Date, License Number and Date of Birth areas become required.

### 22.4 **System Exceptions**

None identified at this time.

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## 23. Date of Birth

### 23.1 Behavior

This will be a numeric field. It will not be formatted for presentation purposes. The user may enter delineating characters, but these will be stripped out before committing the data to the database. (As determined for all locale specific formatting.)

### 23.2 Validation

If values are entered into any one or combination of Expiration Date, State Issued and/or License Number, then Date of Birth is also required. The system will check which of these four areas contain or do not contain values and will present the user with a message stating which area(s) need to have a value. See example with License

### 23.3 Business Exceptions

If the Date of Birth entered calculates to being equal to, or greater than, 70 years of age, the system displays a message "Age is over age restriction". The user may continue, change the Date of Birth or cancel.

If the Date of Birth entered calculates to being between the ages of 18 to 20, the system displays a message "Age is under age restriction". The user may continue, change the Date of Birth or cancel.

If the Date of Birth entered calculates to being between the ages of 21 to 24, the system displays a message "Age is under age restriction". The user may continue, change the Date of Birth or cancel.

(Note: While these are now identical behaviors, in the future, different groups want to have the ability to have different actions and messages for these 2 age groups.)

If the Date of Birth entered calculates to being equal to, or less than, 17 years of age, the system displays a message "Age is under age restriction". The user may NOT continue, they must change the Date of Birth or cancel.

If values are entered into Date of Birth, then the Expiration Date, License Number and State areas become required.

### 23.4 System Exceptions

None identified at this time.

## 24. Social Security Number

### 24.1 Behavior

This area will allow entry of alphanumeric values.

### 24.2 Validation

None identified at this time.

### 24.3 Business Exceptions

None identified at this time.

### 24.4 System Exceptions

None identified at this time.

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## 25. Height

### 25.1 Behavior

This will be two areas, in North America one for feet and the other for inches. It will allow entry of numeric values.

### 25.2 Validation

None identified at this time.

### 25.3 Business Exceptions

None identified at this time.

### 25.4 System Exceptions

None identified at this time.

## 26. Eye Color

### 26.1 Behavior

This search criteria area will be a drop-down box. It should default to a blank. The users would also like to have the ability to type a character, alpha or numeric, into the criteria area and have the drop down list position to the character. (If the user enters an "H" the drop down list would position to the first state beginning with "H" in the list)

### 26.2 Validation

None identified at this time.

### 26.3 Business Exceptions

None identified at this time.

### 26.4 System Exceptions

None identified at this time.

## 27. Weight

### 27.1 Behavior

This area will allow entry of numeric values.

### 27.2 Validation

None identified at this time.

### 27.3 Business Exceptions

None identified at this time.

### 27.4 System Exceptions

None identified at this time.

## 28. Hair Color

### 28.1 Behavior

This search criteria area will be a drop-down box. It should default to a blank. The users would also like to have the ability to type a character, alpha or numeric, into the criteria area and have the drop down list position to the character. (If the user enters an "H" the drop down list would position to the first state

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beginning with "H" in the list)

## 28.2 Validation

None identified at this time.

## 28.3 Business Exceptions

None identified at this time.

## 28.4 System Exceptions

None identified at this time.

## 29. Button Line Area

### 29.1 Behavior

The Cancel image/button display the previous panel without saving any changes prior to the last save.  
The Additional Drivers image/button will invoke the additional driver panel, submitting the form to the server.

### 29.2 Validation

None identified at this time.

### 29.3 Business Exceptions

None identified at this time.

### 29.4 System Exceptions

None identified at this time.

## 30. Rules

### 30.1 Behavior

If there is a renter warning concerning the Driver, a renter warning message, similar to the one shown below, should be displayed. It should be defaulted to the "Do Not Rent" selection. The user may override by making the "Rent" selection.  
If the "Do Not Rent" is selected, the system returns to the Reservation Home Panel.  
If the "Rent" is selected, the system returns to original panel.

### 30.2 Validation

None identified at this time.

### 30.3 Business Exceptions

If the user chooses the "Rent" selection, a system note is generated. (See Notes Use Case for specifics.)

### 30.4 System Exceptions

None identified at this time.

**<Company Name>**

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DATE	DESCRIPTION	AMOUNT	BALANCE
1900	Jan 1		100.00
	Feb 1	50.00	150.00
	Mar 1	25.00	175.00
	Apr 1	75.00	250.00
	May 1	100.00	350.00
	Jun 1	150.00	500.00
	Jul 1	200.00	700.00
	Aug 1	250.00	950.00
	Sep 1	300.00	1250.00
	Oct 1	350.00	1600.00
	Nov 1	400.00	2000.00
	Dec 1	450.00	2450.00
1901	Jan 1	500.00	2950.00
	Feb 1	550.00	3500.00
	Mar 1	600.00	4100.00
	Apr 1	650.00	4750.00
	May 1	700.00	5450.00
	Jun 1	750.00	6200.00
	Jul 1	800.00	7000.00
	Aug 1	850.00	7850.00
	Sep 1	900.00	8750.00
	Oct 1	950.00	9700.00
	Nov 1	1000.00	10700.00
	Dec 1	1050.00	11750.00
1902	Jan 1	1100.00	12850.00
	Feb 1	1150.00	14000.00
	Mar 1	1200.00	15200.00
	Apr 1	1250.00	16450.00
	May 1	1300.00	17750.00
	Jun 1	1350.00	19100.00
	Jul 1	1400.00	20500.00
	Aug 1	1450.00	21950.00
	Sep 1	1500.00	23450.00
	Oct 1	1550.00	25000.00
	Nov 1	1600.00	26600.00
	Dec 1	1650.00	28250.00
1903	Jan 1	1700.00	29950.00
	Feb 1	1750.00	31700.00
	Mar 1	1800.00	33500.00
	Apr 1	1850.00	35350.00
	May 1	1900.00	37250.00
	Jun 1	1950.00	39200.00
	Jul 1	2000.00	41200.00
	Aug 1	2050.00	43250.00
	Sep 1	2100.00	45350.00
	Oct 1	2150.00	47500.00
	Nov 1	2200.00	49700.00
	Dec 1	2250.00	51950.00
1904	Jan 1	2300.00	54250.00
	Feb 1	2350.00	56600.00
	Mar 1	2400.00	59000.00
	Apr 1	2450.00	61450.00
	May 1	2500.00	63950.00
	Jun 1	2550.00	66500.00
	Jul 1	2600.00	69100.00
	Aug 1	2650.00	71750.00
	Sep 1	2700.00	74450.00
	Oct 1	2750.00	77200.00
	Nov 1	2800.00	80000.00
	Dec 1	2850.00	82850.00
1905	Jan 1	2900.00	85750.00
	Feb 1	2950.00	88700.00
	Mar 1	3000.00	91700.00
	Apr 1	3050.00	94750.00
	May 1	3100.00	97850.00
	Jun 1	3150.00	101000.00
	Jul 1	3200.00	104200.00
	Aug 1	3250.00	107450.00
	Sep 1	3300.00	110750.00
	Oct 1	3350.00	114100.00
	Nov 1	3400.00	117500.00
	Dec 1	3450.00	120950.00
1906	Jan 1	3500.00	124450.00
	Feb 1	3550.00	128000.00
	Mar 1	3600.00	131600.00
	Apr 1	3650.00	135250.00
	May 1	3700.00	138950.00
	Jun 1	3750.00	142700.00
	Jul 1	3800.00	146500.00
	Aug 1	3850.00	150350.00
	Sep 1	3900.00	154250.00
	Oct 1	3950.00	158200.00
	Nov 1	4000.00	162200.00
	Dec 1	4050.00	166250.00
1907	Jan 1</		

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## Revision History

Date	Version	Description	Author
6/12/01	1.1	Created Document	Johnny S. Johnston
6/15/2001	2.0	Revised for second panel review meeting	Johnny S. Johnston



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## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the GEO Framework aspects on all types of address screens.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. GEO Framework Choices Screen

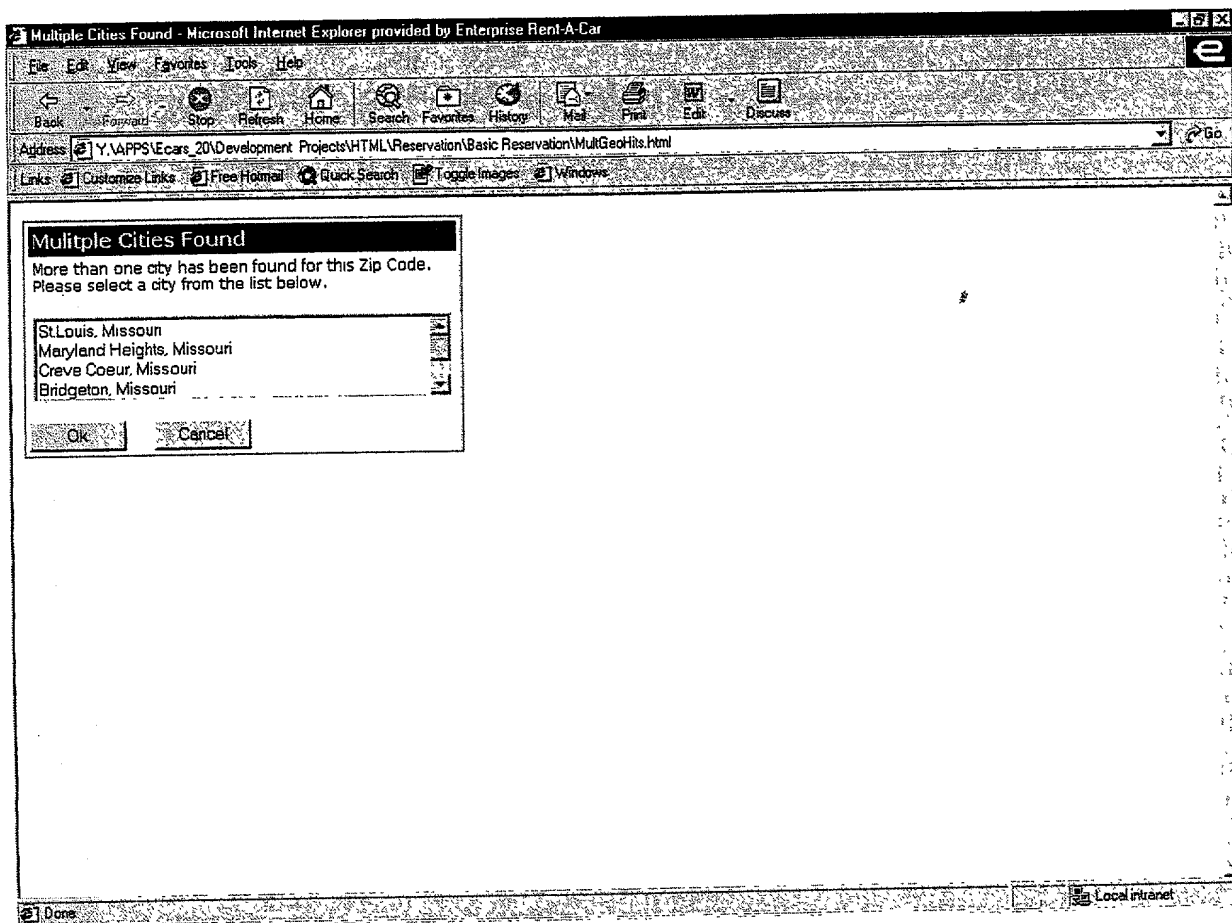


Figure 1 – GEO Framework Screen

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### 3. Zip Code Area

#### 3.1 Behavior

This will be an alphanumeric area. The user will enter a zip code and then have the option to invoke the GEO Framework search or not. The GEO Framework search is to locate a City and a State associated with the zip code entered.

If the GEO Framework search is selected, three results might happen:

1. There are not any matches to the values entered. If this happens, a message is displayed "No matches were found for zip code."
2. There is a single match to the values entered. If this happens, the City and State areas are populated with the match values found.
3. There are multiple matches to the values entered. If this happens, the user is presented with the panel in 2. above, and the user must make a selection and click on the Ok button. The system will then populate the City and State areas with the selected values.

If the GEO Framework is not selected the system accepts values entered.

#### 3.2 Validation

None identified at this time.

#### 3.3 Business Exceptions

None identified at this time.

#### 3.4 System Exceptions

None identified at this time.

### 4. Country Area

#### 4.1 Behavior

This search criteria area will be a drop-down box. It should be defaulted to the Country of the terminal locale on initial entry or navigation to an address panel.

The users would also like to have the ability to type a character, alpha or numeric, into the criteria area and have the drop down list position to the character. (If the user enters an "H" the drop down list would position to the first state beginning with "H" in the list.

#### 4.2 Validation

None identified at this time.

#### 4.3 Business Exceptions

None identified at this time.

#### 4.4 System Exceptions

None identified at this time.

### 5. City Area

#### 5.1 Behavior

This area is a free form alphanumeric area.

If the GEO Framework search has been selected and a single value was found, or the user

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selected a value from the list, then this area will be populated with that value.  
Even though a value may be populated by the system, the area still may be changed or edited.

## 5.2 Validation

None identified at this time.

## 5.3 Business Exceptions

None identified at this time.

## 5.4 System Exceptions

None identified at this time.

# 6. State Area

## 6.1 Behavior

This search criteria area will be a drop-down box. It should be defaulted to a blank.  
If the GEO Framework search has been selected and a single value was found, or the user  
selected a value from the list, then this area will be populated with that value.  
The users would also like to have the ability to type a character, alpha or numeric, into the criteria area and  
have the drop down list position to the character. (If the user enters an "H" the drop down list would  
position to the first state beginning with "H" in the list.

## 6.2 Validation

None identified at this time.

## 6.3 Business Exceptions

None identified at this time.

## 6.4 System Exceptions

None identified at this time

# 7. Button Line Area

## 7.1 Behavior

The Cancel image/button will remove this image and present the previous panel.  
The Ok image/button will take the selected city and state and populate the City and State areas within the  
original address panel with the values selected.

## 7.2 Validation

None identified at this time.

## 7.3 Business Exceptions

None identified at this time.

## 7.4 System Exceptions

None identified at this time.

# 8. Rules

None identified at this time.

# 9. Security

The user must have the appropriate security level to access this screen. The user is allowed to view or print

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anything. It is when they attempt to edit a reservation that their security restrictions will be enforced.

**<Company Name>**

## ECARS 2.0 - Other Address Screen Action Specification

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## Revision History

Date	Version	Description	Author
6/12/01	1.1	Created Document	Johnny S. Johnston
09/04/2001	1.2	Updated due to changes from Navigation use case.	James Atteberry

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0123456789  
 10111213141516171819  
 20212223242526272829  
 30313233343536373839  
 40414243444546474849  
 50515253545556575859  
 60616263646566676869  
 70717273747576777879  
 80818283848586878889  
 90919293949596979899

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## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Other Address screen.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Other Address Screen

Other Address - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

Reservations | Rentals | Callbacks

**Drivers - Other Address** - Options - Go X

**DRIVERS**  
 James Atteberry  
 Additional Drivers: 2  
 Atteberry, James | Smith, Chris | Cloud, Kevin

**REFERRAL**  
 Account Name  
 Contact Name

**DATES/RATES**  
 08/27/2001; ECAR  
 Daily Rate; ASD

**BILL-TO**  
 Account Name  
 Contact Name

**VEHICLE/SHOP**  
 1997 Dodge Avenger  
 Shop Account Name

**NOTES**  
 Notes Taken: 1  
 Changed: 08/27/2001

Other Address  
 Address Type  
 Address  
 ZIP  
 Country  
 City  
 State

Back Complete

Res - 411781 | Tkt - 234567 | CbK - 363221

Figure 1 – Other Address Screen

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### 3. Reservation Number

#### 3.1 Behavior

This area shows the unique reservation number that has been assigned to the newly created reservation. The reservation number is 6 alphanumeric characters long. If another reservation is open, its reservation number will be displayed in this area as well. The user will have the ability to have up to 3 reservations open at a time. A hyperlink will be available on the reservation numbers of the reservations that are NOT currently being displayed. For the reservation that is currently displayed, the reservation number will not have a hyperlink available. This is to allow the user to navigate between the open reservations.

#### 3.2 Validation

None identified at this time.

#### 3.3 Business Exceptions

If the user tries to open a 4<sup>th</sup> reservation, the system will display a message stating "A maximum of 3 reservations may be displayed"

#### 3.4 System Exceptions

None identified at this time.

### 4. Other Address Title Bar Area

#### 4.1 Behavior

The option area in the title bar will allow the user to access transaction-wide functions. These functions for Reservation are: -- Options --, Print, Void and Transfer. The default option is "--Options --". The user must press the Go button to initiate the selected function.

The button area in the title bar contains two buttons – a Go button and a Close button.

The Go button is always active, and is used to initiate a function selected in the option area. If the selected option is "--Options --", nothing should happen.

The Close button is always active and is used to close the current transaction. The button is labeled with an 'X'. Pressing this button will cause a confirmation popup, asking the user if they wish to cancel the transaction and lose all changes. If the user selects 'No', they are returned to the same screen. If the user selects 'Yes', the transaction is closed with no changes saved to the database and the user is taken to the Reservation home page.

#### 4.2 Validation

None identified at this time.

#### 4.3 Business Exceptions

None identified at this time.

#### 4.4 System Exceptions

None identified at this time.

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## 5. Driver Tab Navigation Area

### 5.1 Behavior

This area contains a tab for each driver on the transaction. The first tab is the primary renter, with all other tabs being additional drivers. The name on the tab will be the Last Name on the top and the First Name on the bottom of the tab.

By clicking on a tab, the main driver screen for that driver will be brought up.

### 5.2 Validation

### 5.3 Business Exceptions

### 5.4 System Exceptions

## 6. Driver Navigation Area

### 6.1 Behavior

This area gives the user the ability to move to any screen within the Driver area. Each screen within the Driver area is connected by a hyperlink. The screens that have been defined are: Driver, Other Address, Insurance Detail, and Cash Qualification. A hyperlink will NOT be available for the screen that is currently displayed.

### 6.2 Validation

None identified at this time.

### 6.3 Business Exceptions

None identified at this time.

### 6.4 System Exceptions

None identified at this time.

## 7. Other Address Area

### 7.1 Behavior

This area is a free form alphanumeric area.

### 7.2 Validation

None identified at this time.

### 7.3 Business Exceptions

None identified at this time.

### 7.4 System Exceptions

None identified at this time.

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## 8. Other Address Type Area

### 8.1 Behavior

This search criteria area will be a drop-down box. The users would also like to have the ability to type a character, alpha or numeric, into the criteria area and have the drop down list position to the character. (If the user enters an "H" the drop down list would position to the first state beginning with "H" in the list. Valid values are Home, Business, Local and Other.

### 8.2 Validation

None identified at this time.

### 8.3 Business Exceptions

None identified at this time.

### 8.4 System Exceptions

None identified at this time

## 9. City, State, Zip Code and Country, and City Other, State Other, Zip Code Other and Country Other Areas

### 9.1 Behavior

These behaviors are detailed out in the Geo-Framework Search Screen Spec

### 9.2 Validation

None identified at this time.

### 9.3 Business Exceptions

None identified at this time.

### 9.4 System Exceptions

None identified at this time.

## 10. Button Line Area

### 10.1 Behavior

The Back button will take the user back to the main driver screen for the currently selected driver. The Complete button will initiate a save of the transaction. All validations will be performed, returning any errors to the user. If there are no errors, the transaction is written to the database and the user is returned to the Reservation home page.

### 10.2 Validation

None identified at this time.

### 10.3 Business Exceptions

None identified at this time.

### 10.4 System Exceptions

None identified at this time.

## 11. Rules

None identified at this time.

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## 12. Security

The user must have the appropriate security level to access this screen. The user is allowed to view or print anything. It is when they attempt to edit a reservation that their security restrictions will be enforced.

## ECARS 2.0 - Dates and Rates Screen Action Specification

[illegible]

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## Revision History

Date	Version	Description	Author
6/28/2001	1.0	Created Document	Johnny S. Johnston
7/03/2001	2.0	Revision after 1 <sup>st</sup> review	Johnny S. Johnston
7/23/2001	2.1	Revision after 4 <sup>th</sup> panel review.	Johnny S. Johnston
9/10/2001	2.2	Updated domain list order for Req. 7.1 and 13.1	L. Moellman
09/14/2001	2.3	Added Drop Charge field	James Atteberry



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## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Quote a Rate screens.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Dates and Rates - Screens

Reservation: Contracts: Callbacks: Options - Go X

**DRIVERS**  
Driver summary 1  
Driver summary 2

**REFERRAL**  
Referral sum 1  
Referral sum 2

**DATES/RATES**  
Dates summary 1  
Dates summary 2

**BILL-TO**  
Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**  
Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**  
Notes summary 1  
Notes summary 2

**Rates/Dates**

Pickup  
Branch: 0101 LADUE  
Date: MM/DD/YYYY Time: HH:MM A  
Method: Location:  
Return  
Branch: 0101 LADUE  
Date: MM/DD/YYYY Time: HH:MM A  
Method: Location:  
Directions

Rate Source  
Account Name Account Number Rental Type  
-Select- Search  
Rate Plan Car Class  
-Select- Get Rates

Rates

Daily		Weekly		Monthly		Hourly		Mileage	No
Rate	Mileage	Rate	Mileage	Rate	Mileage	Rate	Rate	Charge	Charge
15.99	150	59.99	750	179.99	1500	5.99	0.15		

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Done My Computer

Figure 1 – Dates and Rates Screen – Top Portion

<Project Name>	Version: <1.0>
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<document identifier>	

Enterprise ECARS Application - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

Reservation Tickets Callbacks Vehicle Tools Help

**DRIVERS** **Dates/Rates** - Options - Go

**REFERRAL**

**DATES/RATES**  
10/11/2001

**BILL-TO**

**VEHICLE/SHOP**

**NOTES**  
Notes Taken : 1

**Rates**

Daily		Weekly		Monthly		Hourly	Mileage Charge	No Charge
Rate	Mileage	Rate	Mileage	Rate	Mileage	Rate		<input type="checkbox"/>

**Billing Cycle** **Vehicle Preferences**

**Products**  
CDW PAI Drop Charge

**Account Details**  
More

**Discounts and Specials**  
☐ Add A Special

Start Date	Start Time	End Date*	End Time

**Rate**

Type	Rate	Mileage	No Charge

Previous Next Complete

Figure 2 – Dates and Rates Screen – Middle Portion



<Project Name>	Version: <1.0>
Supplementary Specification	Date: <dd/mmm/yy>
<document identifier>	

Enterprise ECARS Application - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

Reservation Tickets Callbacks Vehicle Tools Help

**DRIVERS** **Dates/Rates** - Options - Go

**REFERRAL** Billing Cycle Vehicle Preferences

**DATES/RATES** Products  
CDW PAI Drop Charge

**BILL-TO** Account Details  
More

**VEHICLE/SHOP** Discounts and Specials  
☐ Add A Special

Start Date	Start Time	End Date	End Time

**NOTES** Notes Taken : 1

Rate

Type	Rate	Mileage	No Charge
			<input type="checkbox"/>

☐ Add A Discount  
0 %

Previous Next Complete

Figure 3 – Dates and Rates Screen – Bottom Portion

<Project Name>	Version: <1.0>
Supplementary Specification	Date: <dd/mmm/yy>
<document identifier>	

Enterprise® ECARS Application - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

Reservation Tickets Callbacks Vehicle Tools Help

**DRIVERS** **Dates/Rates** - Options - Go

**REFERRAL**

Pickup Date: 10/11/2001 Time: Return Date: Time:

Method: Location: Location:

**DATES/RATES** 10/11/2001

**BILL-TO** Directions

**VEHICLE/SHOP** Rate Source Account Name Rental Type

**NOTES** Rate Plan Car 0 Get Rates

Notes Taken : 1

**Rates**

Daily		Weekly		Monthly		Hourly	Mileage		No
Rate	Mileage	Rate	Mileage	Rate	Mileage	Rate	Charge	Charge	

Billing Cycle Vehicle Preferences

Previous Next Complete

Figure 4 – Dates and Rates Screen – Pickup Time select box

<Project Name>	Version: <1.0>
Supplementary Specification	Date: <dd/mmm/yy>
<document identifier>	

Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Reservation Contract Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Rates/Dates** - Options - Go

Account Name Account Number Rental Type

-Select- Search

Rate Plan Car Class

-Select- Get Rates

**Rates Table**

Car Class	Daily		Weekly		Monthly		Hourly Rate	Mileage Charge
	Rate	Mileage	Rate	Mileage	Rate	Mileage		
CCAR	9.99	250	29.99	500	99.99	2500	2.99	0.25
ECAR	15.99	250	34.99	500	109.99	2500	3.99	0.25
FCAR	20.99	250	39.99	500	209.99	2500	4.99	0.25
SCAR	25.99	250	44.99	500	249.99	2500	5.99	0.25
PCAR	30.99	250	49.99	500	309.99	2500	6.99	0.25
LCAR	35.99	250	54.99	500	409.99	2500	7.99	0.25
XCAR	40.99	250	110.99	500	509.99	2500	8.99	0.25

Cancel

Previous Next Complete

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Figure 5 – Dates and Rates Screen – Rate plan pop-up box

<Project Name>	Version: <1.0>
Supplementary Specification	Date: <dd/mmm/yy>
<document identifier>	

Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

Reservations Contracts Callbacks

**DRIVERS**  
 Driver summary 1  
 Driver summary 2

**REFERRAL**  
 Referral sum 1  
 Referral sum 2

**DATES/RATES**  
 Dates summary 1  
 Dates summary 2

**BILL-TO**  
 Bill-To summary 1  
 Bill-To summary 2

**VEHICLE/SHOP**  
 Vehicle/Shop 1  
 Vehicle/Shop 2

**NOTES**  
 Notes summary 1  
 Notes summary 2

**Rates/Dates** - Options - Go

Account Details  
 Hot Line number 1  
 Hot Line number 2  
 More VL

**More Account Details**

**SI Text**  
 Here is some SI text  
 Here is some more SI text  
 And another line.  
 And one more for good measure.

**SI Rules**  
 Car Preference NO LUXURY CARS  
 Fuel Description NO DIESEL  
 Tax Exempt ind TXEX123  
 Auth required ind CALL (636) 4674917 FOR AUTH  
 Claim number required ind CALL (636) 4674917 FOR AUTH  
 Max dollar per day amount 29.99 NO EXCEPTIONS

Previous Next Complete

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Figure 6 – Dates and Rates Screen – More Account Details pop-up box

<Project Name>	Version: <1.0>
Supplementary Specification	Date: <dd/mmm/yy>
<document identifier>	

3 Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Reservations Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Rates/Dates** - Options - Go

Rate Source  
Account Name Account Number Rental Type  
-Select- Search

**Accounts**

Account Name	Account Number	Account Type	Owning CP/BR	Address	City	State	Zip	Telephone
A Collector's Bookstore**	GE1658	Corporate	0101	6275 Delmar	St. Louis	MO	63130	(314) 721-6127
Afi Remodeling Co**	GE1225	Corporate	0102	312 Oak Pk. Village Dr.	Wildwood	MO	63040	(636) 458-1552
Accent Lincoln-mercury**	129498	Dealership	0103	9700 Manchester Rd	St. Louis	MO	63119	(314) 968-5300
Advantage Decorating**	GE0853	Corporate	0104	1601 North 7th St.	St. Louis	MO	63102	(314) 436-1419
African Amer. Rite Of Passage**	GE1538	Corporate	0105	325 Debaliviere	St. Louis	MO	63112	(314) 361-2268
Ahmad Bogossian**	GE0830	Corporate	0106	7743 Arthur	St. Louis	MO	63117	(314) 645-3076
Aiq-cs**	GE0238	Corporate	0107	120 S Central, Ste 300	St. Louis	MO	63105	(000) 000-0000

Cancel

Previous Next Complete

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Figure 7 – Dates and Rates Screen – Account Name Drop Down List

<Project Name>	Version: <1.0>
Supplementary Specification	Date: <dd/mmm/yy>
<document identifier>	

**Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car**

Reservation | Contracts | Callbacks

**DRIVERS**  
 Driver summary 1  
 Driver summary 2

**REFERRAL**  
 Referral sum 1  
 Referral sum 2

**DATES/RATES**  
 Dates summary 1  
 Dates summary 2

**BILL-TO**  
 Bill-To summary 1  
 Bill-To summary 2

**VEHICLE/SHOP**  
 Vehicle/Shop 1  
 Vehicle/Shop 2

**NOTES**  
 Notes summary 1  
 Notes summary 2

**Rates/Dates** [Options] [Go]

Account Details  
 Hot Line number 1  
 Hot Line number 2  
 More [VLF]

**VLF Information**

Range For	Daily VLF Fee		
	Low	High	Average
Group	.26	2.33	.78
ECAR	.42	.59	.52
CCAR	.39	.73	.59
ICAR	.26	.83	.59
SCAR	.34	.96	.74
FCAR	.40	1.01	.81
PCAR	.64	1.19	.92
LCAR	.50	1.62	.97
LCAR1	.86	1.85	1.59

End Date [M/DD/YYYY] End Time [HH:MM A]  
 [No Charge]

[Cancel] [Previous] [Next] [Complete]

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Figure 8 – Dates and Rates Screen – VLF Pop Up Box

### 3. Reservation Number

#### 3.1 Behavior

This area shows the unique reservation number that has been assigned to the newly created reservation. The reservation number is 6 alphanumeric characters long. If another reservation is open, its reservation number will be displayed in this area as well. The user will have the ability to have up to 3 reservations open at a time. A hyperlink will be available on the reservation numbers of the reservations that are NOT currently being displayed. For the reservation that is currently displayed, the reservation number will not have a hyperlink available. This is to allow the user to navigate between the open reservations.

#### 3.2 Validation

None identified at this time.

#### 3.3 Business Exceptions

If the user tries to open a 4th reservation, the system will display a message. See the error

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message supplemental spec for exact text.

### 3.4 System Exceptions

None identified at this time.

## 4. Pickup Group/Branch Area

### 4.1 Behavior

This area is a display only field showing the group/branch currently selected as the Pickup group/branch. It is formatted with the legacy Group number, the legacy Branch number, a space, a dash, another space and the PeopleSoft description of the Branch.

### 4.2 Validation

None identified at this time.

### 4.3 Business Exceptions

None identified at this time.

### 4.4 System Exceptions

None identified at this time.

## 5. Pick Up Date Area

### 5.1 Behavior

This area will be a numeric field. It will not be formatted for presentation purposes. The user may enter delineating characters, but these will be stripped out before searching the database to find an exact date match. There should be a calendar function available which would allow the user to select a date from a calendar icon, or similar feature, instead of entering a value. If the user selects a date from the calendar icons, it will be displayed in the date area formatted appropriately by the locale. (As determined for all locale specific formatting.)

### 5.2 Validation

It will be a valid month, day and year combination. If the date is not valid, the system will display a message. See the error message supplemental spec for exact text.

### 5.3 Business Exceptions

If the user does not enter a date, then for the purpose of quoting a rate this should default to the current date, but do not save the current date in the database. Pick-up date cannot be prior to the current date. If it is, display message to the user. Please see error message supplemental spec for exact text.

### 5.4 System Exceptions

If not a valid month, day and year combination, the normal date in error message should be displayed. See the error message supplemental spec for exact text.

## 6. Pick Up Time Area

### 6.1 Behavior

The pick-up time area will be disabled until there is an entry into the pick-up date area.

**In locales where time is shown by AM PM designation:**

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute and

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<document identifier>	

AM/PM designation, and a maximum of Hour Hour Minute Minute AM/PM designation, i.e. 945A, would designate 9:45 in the morning. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes **must** be two numeric values. The AM/PM designation of "A" or "P" must also be indicated. The user may enter delineating characters, but these will be removed before saving to the database.

**In locales where time is shown by 24 hour designation:**

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute, and a maximum of Hour Hour Minute Minute, i.e. 945 would designate 9:45 in the morning, 1425 would designate 2:25 in the afternoon. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes must be **two** numeric values. The user may enter delineating characters, but these will be removed before saving to the database.

## 6.2 **Validation**

**In locales where time is shown by AM PM designation:**

Time increments can range from 1200A to 1159A and from 1200P until 1159P. If an entry is not within these two ranges display a message to the user. Please see the error message supplemental spec for exact text of message.

**In locales where time is shown by 24 hour designation:**

Time increments can range from 0000 to 2400. If an entry is not within this range display a message to the user. See the error message supplemental spec for exact\*text.

## 6.3 **Business Exceptions**

If no time is entered or selected this should be defaulted to the current time for the purpose of quoting a rate, but not saved to the database.

If the pick-up time is outside of the branch's operating hours, display a message to the user. See Error Message Supplemental spec for exact text.

The pick-up time area will be disabled until there is an entry into the pick-up date area.

## 6.4 **System Exceptions**

None identified at this time.

## 7. **Pick Up Time Drop Down**

### 7.1 **Behavior**

The pick-up time dropdown will be disabled until there is an entry into the pick-up date area.

This drop down icon will display a multi-column combination box. It will display the time in 30 minute increments and the associated number of reservations. When selected, this should be positioned to 7:00 A.M. in the morning.

### 7.2 **Validation**

None identified at this time.

### 7.3 **Business Exceptions**

If no time is entered or selected this should be defaulted to the current time for the purpose of quoting a



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rate, but not saved to the database.

The pick-up time area will be disabled until there is an entry into the pick-up date area.

If the pick-up time is outside of the branch's operating hours, display a message to the user. See the error message supplemental spec for exact text.

#### **7.4 System Exceptions**

None identified at this time.

### **8. Pick Up Method Drop Down**

#### **8.1 Behavior**

This will be a drop down area populated with the following values on the left. The right side is for information only.

Blank

CWC – Customer Will Call

DEL – Delivery

DEL/R – Delivery with Rideback

P/UP – Pick Up

W/IN – Walk In

#### **8.2 Validation**

Any one of the values is a valid selection.

#### **8.3 Business Exceptions**

None identified at this time.

#### **8.4 System Exceptions**

None identified at this time.

### **9. Pick Up Location Area**

#### **9.1 Behavior**

This is a free form alphanumeric area.

#### **9.2 Validation**

None identified at this time.

#### **9.3 Business Exceptions**

None identified at this time.

#### **9.4 System Exceptions**

None identified at this time.

### **10. Pick Up Location Directions Button**

#### **10.1 Behavior**

Selecting this button will display a free form alphanumeric pop-up box. The user may enter information and if the OK button is selected the system will save the information and close the pop-up box. If the user selects the cancel button, the pop-up box will be closed without any changes saved. The user may also "click" outside the pop-up box area, which will close the box without saving any changes.

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Supplementary Specification	Date: <dd/mmm/yy>
<document identifier>	

## 10.2 Validation

None identified at this time.

## 10.3 Business Exceptions

None identified at this time.

## 10.4 System Exceptions

None identified at this time.

# 11. Return Group/Branch Area

## 11.1 Behavior

This area is a display only field showing the group/branch currently selected as the Return group/branch. It is formatted with the legacy Group number, the legacy Branch number, a space, a dash, another space and the PeopleSoft description of the Branch.

## 11.2 Validation

None identified at this time.

## 11.3 Business Exceptions

None identified at this time.

## 11.4 System Exceptions

None identified at this time.

# 12. Return Date Area

## 12.1 Behavior

This area will be a numeric field. It will not be formatted for presentation purposes. The user may enter delineating characters, but these will be stripped out before searching the database to find an exact date match. There should be a calendar function available which would allow the user to select a date from a calendar icon, or similar feature, instead of entering a value. If the user selects a date from the calendar icons, it will be displayed in the date area formatted appropriately by the locale. (As determined for all locale specific formatting.)

## 12.2 Validation

It will be a valid month, day and year combination. See the error message supplemental spec for exact text.

## 12.3 Business Exceptions

If the user does not enter a date, then for the purpose of quoting a rate this should default to one calendar day after the pick-up date, but will not be saved to the database.

The return date cannot be before the pick-up date. If it is, display message to the user. See the error message supplemental spec for the exact text.

## 12.4 System Exceptions

If not a valid month, day and year combination, the normal date in error message should be displayed. See the error message supplemental spec for exact text.

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Supplementary Specification	Date: <dd/mmm/yy>
<document identifier>	

### 13. Return Time Area

#### 13.1 Behavior

The return time area will be disabled until there is an entry into the return date area.

##### In locales where time is shown by AM PM designation:

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute and AM/PM designation, and a maximum of Hour Hour Minute Minute AM/PM designation. i.e. 945A, would designate 9:45 in the morning. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes **must** be two numeric values. The AM/PM designation of "A" or "P" must also be indicated. The user may enter delineating characters, but these will be removed before saving to the database.

##### In locales where time is shown by 24 hour designation:

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute, and a maximum of Hour Hour Minute Minute, i.e. 945 would designate 9:45 in the morning, 1425 would designate 2:25 in the afternoon. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes must be **two** numeric values. The user may enter delineating characters, but these will be removed before saving to the database.

#### 13.2 Validation

##### In locales where time is shown by AM PM designation:

Time increments can range from 1200A to 1159A and from 1200P until 1159P. If an entry is not within these two ranges display a message to the user. See the error message supplemental spec for exact text.

##### In locales where time is shown by 24 hour designation:

Time increments can range from 0000 to 2400. If an entry is not within this range display a message to the user. See the error message supplemental spec for exact text.

#### 13.3 Business Exceptions

If no time is entered or selected this should be defaulted to the same time as the pick-up time for the purpose of quoting a rate but should not be saved to the database.

The return time area will be disabled until there is an entry into the return date area.

#### 13.4 System Exceptions

None identified at this time.

### 14. Return Time Drop Down

#### 14.1 Behavior

The return time dropdown will be disabled until there is an entry into the return date area.

This drop down icon will display the time in 15-minute increments. When selected, it should be positioned to the same time as the pick up time.

<Project Name>	Version: <1.0>
Supplementary Specification	Date: <dd/mmm/yy>
<document identifier>	

## 14.2 Validation

None identified at this time.

## 14.3 Business Exceptions

If no time is entered or selected this should be defaulted to the same time as the pick-up time for the purpose of quoting a rate, but not saved to the database.

The return time dropdown will be disabled until there is an entry into the return date area.

## 14.4 System Exceptions

None identified at this time.

## 15. Return Method Drop Down

### 15.1 Behavior

This will be a drop down list of the following values.

Blank

Branch

Drop

Ride Back

Note: In the U.K. the value of APU (Automatic Pick Up) will replace Drop.

### 15.2 Validation

Any one of the values is a valid selection.

### 15.3 Business Exceptions

None identified at this time.

### 15.4 System Exceptions

None identified at this time.

## 16. Return Location Area

### 16.1 Behavior

This is a free form alphanumeric area.

### 16.2 Validation

None identified at this time.

### 16.3 Business Exceptions

None identified at this time.

### 16.4 System Exceptions

None identified at this time.

## 17. Account Name Drop Down

### 17.1 Behavior

This area will be a drop down list of the Branch's short list for North America. For everywhere else it will be the Group's Account list. If there are any of the following associated with the particular reservation, they will appear at the top or beginning of the list in the following order.

1) Any Bill-To Accounts

2) Any Referral Accounts – Excluding employees as a referral source.

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### 3) Any Shop Accounts

The information displayed about an Account will be in the following order:

- 1) Account Name
- 2) Account Number
- 3) Rental Type
- 4) Owning Group/Branch
- 5) Address
- 6) City
- 7) State
- 8) Zip
- 9) Telephone

The Account Name in the display area will have a hyper-link which, when selected, will populate the Account Name, Account Number, Rental Type and Rate Plan areas on the Dates and Rates panel.

## 17.2 Validation

None identified at this time.

## 17.3 Business Exceptions

If Account name or number is selected and the following account types are determined, then other areas will be defaulted to the values shown.

<u>Account Type</u>	<u>Rental Type</u>	<u>Billing Cycle</u>
<u>Insurance</u>	<u>Insurance</u>	<u>Calendar Day</u>
<u>Bodyshop</u>	<u>Bodyshop</u>	<u>Calendar Day</u>
<u>Dealership</u>	<u>Dealership</u>	<u>24 hour</u>
<u>Corporate</u>	<u>Corporate</u>	<u>24 hour</u>
<u>Government</u>	<u>Corporate</u>	<u>24 hour</u>
<u>Fleet</u>	<u>Corporate</u>	<u>24 hour</u>
<u>Other</u>	<u>Other</u>	<u>24 hour</u>

## 17.4 System Exceptions

None identified at this time.

## 18. Account Number Area

### 18.1 Behavior

This area will allow entry of alphanumeric values. When there is a match, the system will populate the Account Name, Account Number, Rental Type and Rate Plan areas on the Dates and Rates panel.

### 18.2 Validation

None identified at this time.

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### 18.3 Business Exceptions

None identified at this time.

### 18.4 System Exceptions

None identified at this time.

## 19. Search Button

### 19.1 Behavior

Selecting this button will display the account search panel. See Referral Source Supplementary Specification for details.

### 19.2 Validation

None identified at this time.

### 19.3 Business Exceptions

None identified at this time.

### 19.4 System Exceptions

None identified at this time.

## 20. Rental Type Drop Down

### 20.1 Behavior

This area will be a drop down list of Rental types.

The domain values in the database are:

- Body Shop
- Corporate
- Dealership
- Insurance
- Other
- Retail
- Blank

See list in account name area for defaults, based on account.

It is also possible to leave the Account Name and Account Number areas blank and to select a Rental Type value from the drop down list and select the Get Rates Button. If this is performed, the system will get the Group/Branch default rates for the rental type selected and display this in the pop-up rate table display.

### 20.2 Validation

Any value selected is valid.

### 20.3 Business Exceptions

None identified at this time.

### 20.4 System Exceptions

None identified at this time.

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## 21. Rate Plan Drop Down

### 21.1 Behavior

This area will be populated when an Account Name, Account Number or a Rental Type has been selected.

If there are multiple plans associated with an Account, it will list all of the rate plans associated with that Account, and the user must choose one. When there are multiple rate plans, the value "select" will appear in area so the user knows that there are multiple rate plans and selection of a single one is required.

If there is only a single rate plan associated with and Account then the rate plan pop-up box will appear show all of the car classes and rates associated with that account.

### 21.2 Validation

None identified at this time.

### 21.3 Business Exceptions

If no rate plans are associated with an Account then a message is displayed. See the error message supplemental spec for exact text.

### 21.4 System Exceptions

None identified at this time.

## 22. Car Class Drop Down

### 22.1 Behavior

This area will be a drop down list that also allows entry of alphanumeric values. The drop down list will be comprised of the most commonly used car classes, for North America. Europe will show all of the car classes associated with that country. The entry of alphanumeric values will be edited against a larger more comprehensive car class list.

Drop down list values for North America.

#### Class and Type

ECAR  
CCAR  
ICAR  
SCAR  
FCAR  
PCAR  
LCAR  
MVAR  
XFAR  
XPAR  
XXAR  
XVAR

Drop down list values for Ireland.

Class and Type \_\_\_\_\_ Description (Information Only)

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A	MINI
B	SUPERMINI
C	LOWER MEDIUM 1.3/1.4
D	LOWER MEDIUM 1.6
E	UPPER MEDIUM 1.8
F	UPPER MEDIUM 2.0
G	EXECUTIVE
MMPV	MINI MPV
MPV	MPV
SMPREM	SMALL PREMIUM
LGPREM	LARGE PREMIUM
EXPREM	EXECUTIVE PREMIUM
SPEC	SPECIALITY
CEST	LOWER MEDIUM 1.3/1.4 ESTATE
DEST	LOWER MEDIUM 1.6 ESTATE
EEST	UPPER MEDIUM 1.8 ESTATE
FEST	UPPER MEDIUM 2.0 ESTATE
GEST	EXECUTIVE ESTATE
SPREE	SMALL PREMIUM ESTATE
LPREE	LARGE PREMIUM ESTATE
SMCV	SMALL COMMERCIAL VAN
LGCV2	LG COMM VAN-LOW/MED ROOF/SWB
LGCV3	LG COMM VAN-HIGH ROOF/LWB
MBUS10	MINIBUS-10 SEAT
MBUS12	MINIBUS-12 SEAT
MBUS15	MINIBUS-15 SEAT
MBUS17	MINIBUS-17 SEAT
AA	MINI-AUTO GEARBOX
BA	SUPERMINI-AUTO GEARBOX
CA	LOWER MEDIUM 1.3/1.4-AUTO
DA	LOWER MEDIUM 1.6-AUTO

**Class and Type**                      **Description (Information Only)**

EA	UPPER MEDIUM 1.8-AUTO
FA	UPPER MEDIUM 2.0-AUTO
GA	EXECUTIVE-AUTO GEARBOX
MMPVA	MINI MPV-AUTO GEARBOX
MPVA	MPV-AUTO GEARBOX
SPREA	SMALL PREMIUM-AUTO GEARBOX
LGPREA	LARGE PREMIUM-AUTO GEARBOX
EXPREA	EXEC PREMIUM-AUTO GEARBOX
SPECA	SPECIALTY-AUTO GEARBOX
CESTA	LOWER MEDIUM 1.3/1.4 EST-AUTO
DESTA	LOWER MEDIUM 1.6 ESTATE-AUTO
EESTA	UPPER MEDIUM 1.8 EST-AUTO
FESTA	UPPER MEDIUM 2.0 ESTATE-AUTO
GESTA	EXECUTIVE ESTATE-AUTO
SPREEA	SMALL PREMIUM ESTATE-AUTO
LPREEA	LARGE PREMIUM ESTATE-AUTO



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Drop down list values for U.K.

**Class and Type**      **Description (Information Only)**

A	MINI
B	SUPERMINI
C	LOWER MEDIUM 1.3/1.4
D	LOWER MEDIUM 1.6
E	UPPER MEDIUM 1.8
F	UPPER MEDIUM 2.0
G	EXECUTIVE
MMPV	MINI MPV
MPV	MPV
SMPREM	SMALL PREMIUM
LGPREM	LARGE PREMIUM
EXPREM	EXECUTIVE PREMIUM
SPEC	SPECIALITY
CEST	LOWER MEDIUM 1.3/1.4 ESTATE
DEST	LOWER MEDIUM 1.6 ESTATE
EEST	UPPER MEDIUM 1.8 ESTATE
FEST	UPPER MEDIUM 2.0 ESTATE
GEST	EXECUTIVE ESTATE
SPREE	SMALL PREMIUM ESTATE
LPREE	LARGE PREMIUM ESTATE
SMCV	SMALL COMMERCIAL VAN
LGCV2	LG COMM VAN-LOW/MED ROOF/SWB
LGCV3	LG COMM VAN-HIGH ROOF/LWB
MBUS10	MINIBUS-10 SEAT

Drop down list values for U.K.

**Class and Type**      **Description (Information Only)**

MBUS12	MINIBUS-12 SEAT
MBUS15	MINIBUS-15 SEAT
MBUS17	MINIBUS-17 SEAT
AA	MINI-AUTO GEARBOX
BA	SUPERMINI-AUTO GEARBOX
CA	LOWER MEDIUM 1.3/1.4-AUTO
DA	LOWER MEDIUM 1.6-AUTO
EA	UPPER MEDIUM 1.8-AUTO
FA	UPPER MEDIUM 2.0-AUTO
GA	EXECUTIVE-AUTO GEARBOX
MMPVA	MINI MPV-AUTO GEARBOX
MPVA	MPV-AUTO GEARBOX
SPREA	SMALL PREMIUM-AUTO GEARBOX
LGPREA	LARGE PREMIUM-AUTO GEARBOX
EXPREA	EXEC PREMIUM-AUTO GEARBOX
SPECA	SPECIALTY-AUTO GEARBOX
CESTA	LOWER MEDIUM 1.3/1/4 EST-AUTO

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DESTA	LOWER MEDIUM 1.6 ESTATE-AUTO
EESTA	UPPER MEDIUM 1.8 EST-AUTO
FESTA	UPPER MEDIUM 2.0 ESTATE-AUTO
GESTA	EXECUTIVE ESTATE-AUTO
SPREEA	SMALL PREMIUM ESTATE-AUTO
LPREEA	LARGE PREMIUM ESTATE-AUTO

### Drop down list values for Germany

#### Class and Type      Description (Information Only)

A	MINI
B	SUPERMINI
C	LOWER MEDIUM
D	PREM LOWER MED
E	UPPER MEDIUM
F	PREM UPPER MED
G	PREMIUM EXECUTIVE
H	LUXURY
CKOM	LOWER MED KOMBI
EKOM	UPPER MEDIUM KOMBI
FKOM	PREM UPPER MED KOMBI
GKOM	PREMIUM EXECUTIVE KOMBI
AA	MINI-AUTOMATIK
BA	SUPERMINI-AUTOMATIK
CA	LOWER MEDIUM-AUTOMATIK
DA	PREM LOWER MED-AUTOMATIK
EA	UPPER MEDIUM-AUTOMATIK

#### Class and Type      Description (Information Only)

FA	PREM UPPER MED-AUTOMATIK
GA	PREMIUM EXECUTIVE-AUTOMATIK
HA	LUXURY-AUTOMATIK
MMPV	MINI MINIVAN
MPV	MINIVAN
SPEC	CABRIO SPECIALTY
SMTR	SMALL TRANSPORTER
LGTR1	LARGE TRANSPORTERS-SWB
LGTR2	LG TRANSPORTERS-HI ROOF/LWB
4WD	4WD SPORT UTILITY
SM4W	SMALL 4WD SPORT UTILITY
MMPVA	MINI MINIVAN-AUTOMATIK
MPVA	MINIVAN-AUTOMATIK
4WDA	4WD SPORT UTILITY-AUTOMATIK
SM4WA	SMALL 4WD SPORT UTIL-AUTOMATIK
SPECA	CABRIO SPECIALTY-AUTOMATIK
CKOMA	LOWER MED KOMBI-AUTOMATIK
EKOMA	UPPER MEDIUM KOMBI-AUTOMATIK
FKOMA	PREM UPPER MED KOMBI-AUTOMATIK

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GKOMA      PREM EXEC KOMBI-AUTOMATIK

## 22.2 Validation

None identified at this time.

## 22.3 Business Exceptions

If the values entered are not one of the ones listed below, a message is displayed. See the error message supplemental spec for exact text.

Car Class Edit List of Values for North America.

### Class and Type

MCAR

MBAR

MDAR

MXAR

MSAR

MTAR

MWAR

MVAR

MFAR

MPAR

ECAR

EBAR

EDAR

EXAR

ESAR

ETAR

EWAR

EVAR

EFAR

EPAR

CCAR

CBAR

CDAR

CXAR

CSAR

CTAR

CWAR

CVAR

CFAR

CPAR

ICAR

IBAR

IDAR

IXAR

ISAR

ITAR

IWAR

IVAR

IFAR

IPAR

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SCAR  
SBAR  
SDAR  
SXAR  
SSAR  
STAR  
SWAR  
SVAR  
SFAR  
SPAR  
FCAR  
FBAR  
FDAR  
FXAR  
FSAR  
FTAR  
FWAR  
FVAR  
FFAR  
FPAR  
PCAR  
PBAR  
PDAR  
PXAR  
PSAR  
PTAR  
PWAR  
PVAR  
PFAR  
PPAR  
LCAR  
LBAR  
LDAR  
LXAR  
LSAR  
LTAR  
LWAR  
LVAR  
LFAR  
LPAR  
XCAR  
XBAR  
XDAR  
XXAR  
XSAR  
XTAR  
XWAR  
XVAR  
XFAR  
XPAR

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## 22.4 System Exceptions

None identified at this time.

## 23. Get Rates Button

### 23.1 Behavior

Selection of this button will have the system execute a search for rate plans associated with the information entered. No rate tables will display for a rate search until the Get Rates Button is pressed.

### 23.2 Validation

None identified at this time.

### 23.3 Business Exceptions

At a minimum there must be an Account Name or an Account Number to search for rates. If the user selects this button without one of these a message is displayed. See the error message supplemental spec for exact text.

### 23.4 System Exceptions

None identified at this time.

## 24. Rate Plan – Pop-Up Display Area

### 24.1 Behavior

This is a pop-up window that will display the rates of a rate plan associated with an Account. Information displayed is:

Rate pop-up box columns and information:

- Car Class
- Daily – Rate and Mileage
- Weekly – Rate and Mileage
- Monthly – Rate and Mileage
- Hourly - Rate
- Mileage Charge

Car class will have a hyper-link which will allow the user to select the rate they want. This will then populate the rates display area on the Dates and Rates panel.

### 24.2 Validation

None identified at this time.

### 24.3 Business Exceptions

If an Account has more than one rate plan associated with it, then this information cannot be displayed until the Rate Plan area has a value.

If an Account has a single rate plan associated with it, then this information is displayed after the Account Name is selected or an Account Number is entered and the Get Rates Button is pressed.

If an Account has a single rate plan and there is a value in the Car Class area, and that car class is in the rate plan and the Get Rates Button is pressed, then the rates display area of the Dates and Rates panel is populated with the appropriate information and the rate plan pop-up window is NOT displayed.

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If an Account has multiple rate plans and there is a value in the Car Class area, and there is not a value in Rate Plan area, a message should display to the user. See the error message supplemental spec for exact text.

If an Account has a multiple rate plans, and there is a value in the Rate Plan area and there is a value in the Car Class area, and that car class is in the rate plan, then the rates display area of the Dates and Rates panel is populated with the appropriate information and the rate plan pop-up window is NOT displayed.

If an Account has a single rate plans, and there is a value in the Car Class area, but that car class is not in the rate plan, then a message is displayed. See the error message supplemental spec for exact text.

If an Account has a multiple rate plans, and there is a value in the Rate Plan area and there is a value in the Car Class area, but that car class is not in the rate plan, then a message is displayed. See the error message supplemental spec for exact text.

## 24.4 System Exceptions

None identified at this time

## 25. Rate Plan – Display Area

### 25.1 Behavior

This is a display area that allows the user to manually enter rates or can be populated by the system once the user has determined a set of rates to be used for the reservation.

The fields available to the user are:

- Daily Rate
- Daily Mileage
- Weekly Rate
- Weekly Mileage
- Monthly Rate
- Monthly Mileage
- Hourly Rate
- Mileage Charge
- No Charge Check Box

All of the information presented has the ability to be edited or changed.

There is an interaction between the Mileage Charge and the No Charge Check Box. If the No Charge Check Box is selected, then the Mileage Charge is set to zero and the area disabled. Unselecting the No Charge Check Box will enable the Mile Charge area for entering values.

### 25.2 Validation

None identified at this time.

### 25.3 Business Exceptions

Negative values may not be entered. If attempted, display message. See the error message supplemental

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spec for exact text.

## 25.4 System Exceptions

None identified at this time

## 26. Billing Cycle Drop Down

### 26.1 Behavior

This area will initially default to the billing cycle associated with the Account and Rate Plan selected. It may be changed to another value.

Drop down domain values are Blank, 24 Hour and Calendar Day.

### 26.2 Validation

None identified at this time.

### 26.3 Business Exceptions

See list in account name area for defaults, based on account. If the user or system selects "Calendar day" as a value in this field, the hourly rate field must be disabled. If the user or system changes the value to either blank or 24 hour, the hourly rate field must be enabled again.

### 26.4 System Exceptions

None identified at this time

## 27. Vehicle Preferences Area

### 27.1 Behavior

This area will allow entry of alphanumeric values.

### 27.2 Validation

None identified at this time.

### 27.3 Business Exceptions

None identified at this time

### 27.4 System Exceptions

None identified at this time

## 28. Products - CDW Area

### 28.1 Behavior

This area will allow the user to enter a currency value for CDW. If the user has selected an account, and the account has values for CDW, these should be populated in the area as well. The user can change or remove the values at anytime.

### 28.2 Validation

None identified at this time.

### 28.3 Business Exceptions

Negative values may not be entered. If attempted, display message. See the error message supplemental spec for exact text.

### 28.4 System Exceptions

None identified at this time

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## **29. Products - PAI Area**

### **29.1 Behavior**

This area will allow the user to enter a currency value for PAI. If the user has selected an account, and the account has a value for PAI, this value should be populated into the area. If a value already exists, the new value will overwrite the existing value. The user can change or remove the value at anytime.

### **29.2 Validation**

None identified at this time.

### **29.3 Business Exceptions**

Negative values may not be entered. If attempted, display message. See the error message supplemental spec for exact text.

### **29.4 System Exceptions**

None identified at this time

## **30. Products – Drop Charge area**

### **30.1 Behavior**

The area will allow the user to enter a drop charge for the reservation. It may be changed for edited.

### **30.2 Validation**

None identified at this time.

### **30.3 Business Exceptions**

A numeric value greater than or equal to zero must be entered.

### **30.4 System Exceptions**

None identified at this time.

## **31. Account Details Area**

### **31.1 Behavior**

This area will display the two "hot lines" from legacy Special Instructions associated with a rate plan for an Account. It is a display only area.

### **31.2 Validation**

None identified at this time.

### **31.3 Business Exceptions**

None identified at this time.

### **31.4 System Exceptions**

None identified at this time.

## **32. Account Details "More" Button**

### **32.1 Behavior**

Selection of this button will display a pop-up box which will display all of the SI detail associated with a rate plan for an Account.



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### 32.2 Validation

None identified at this time.

### 32.3 Business Exceptions

None identified at this time.

### 32.4 System Exceptions

None identified at this time.

## 33. VLF Button

### 33.1 Behavior

Selection of this button will display a pop-up box which will display all of the Vehicle License Fee information which must be given to a renter in certain states.

### 33.2 Validation

None identified at this time.

### 33.3 Business Exceptions

None identified at this time.

### 33.4 System Exceptions

None identified at this time.

## 34. Discount and Specials – Add a Special Check Box

### 34.1 Behavior

Selection of this check box will enable all of the “Special” input areas.

### 34.2 Validation

None identified at this time.

### 34.3 Business Exceptions

In order to have a special, a billing cycle must be specified. If this is checked, and billing cycle is blank, display a message. See the error message supplemental spec for exact text.

### 34.4 System Exceptions

None identified at this time.

## 35. Special – Start Date Area

### 35.1 Behavior

This area will be a numeric field. It will not be formatted for presentation purposes.  
The user may enter delineating characters, but these will be stripped out before searching the database to find an exact date match. There should be a calendar function available which would allow the user to select a date from a calendar icon, or similar feature, instead of entering a value. If the user selects a date from the calendar icons, it will be displayed in the date area formatted appropriately by the locale. (As determined for all locale specific formatting.)

### 35.2 Validation

It will be a valid month, day and year combination.

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### 35.3 Business Exceptions

If there is a Pick-Up date entered then the Special Start date cannot be prior to the Pick-up date. If it is, display a message. See the error message supplemental spec for exact text.

If there is no Pick-up date, then the Start date cannot be prior to the current date. If it is, display a message. See the error message supplemental spec for exact text.

All of date and time fields are required for a special. If a Start date not entered, display a message. See the error message supplemental spec for exact text.

### 35.4 System Exceptions

If not a valid month, day and year combination, the normal date in error message should be displayed. See the error message supplemental spec for exact text. cu

## 36. Special – Start Time Area

### 36.1 Behavior

The start time area will be disabled until there is an entry into the start date area.

#### In locales where time is shown by AM PM designation:

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute and AM/PM designation, and a maximum of Hour Hour Minute Minute AM/PM designation. i.e. 945A, would designate 9:45 in the morning. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes **must** be two numeric values. The AM/PM designation of "A" or "P" must also be indicated. The user may enter delineating characters, but these will be removed before saving to the database.

#### In locales where time is shown by 24 hour designation:

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute, and a maximum of Hour Hour Minute Minute, i.e. 945 would designate 9:45 in the morning, 1425 would designate 2:25 in the afternoon. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes **must** be two numeric values. The user may enter delineating characters, but these will be removed before saving to the database.

### 36.2 Validation

#### In locales where time is shown by AM PM designation:

Time increments can range from 1200A to 1159A and from 1200P until 1159P. If an entry is not within these two ranges display. See the error message supplemental spec for exact text.

#### In locales where time is shown by 24 hour designation:

Time increments can range from 0000 to 2400. If an entry is not within this range display a message to the user. See the error message supplemental spec for exact text.

### 36.3 Business Exceptions

The start time area will be disabled until there is an entry into the start date area.

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#### 36.4 System Exceptions

None identified at this time.

### 37. Special - Start Time Drop Down

#### 37.1 Behavior

The start time dropdown will be disabled until there is an entry into the start date area.

This drop down icon will display the time in 15-minute increments. When selected, it should be positioned to the ¼ hour increment immediately preceding the current time and format according to the locale's format.

#### 37.2 Validation

None identified at this time.

#### 37.3 Business Exceptions

The start time dropdown will be disabled until there is an entry into the start date area.

#### 37.4 System Exceptions

None identified at this time.

### 38. Special – End Date Area

#### 38.1 Behavior

This area will be a numeric field. It will not be formatted for presentation purposes.

The user may enter delineating characters, but these will be stripped out before searching the database to find an exact date match. There should be a calendar function available which would allow the user to select a date from a calendar icon, or similar feature, instead of entering a value. If the user selects a date from the calendar icons, it will be displayed in the date area formatted appropriately by the locale. (As determined for all locale specific formatting.)

#### 38.2 Validation

It will be a valid month, day and year combination.

#### 38.3 Business Exceptions

Special End date cannot be prior to the Special Start date. If it is, display a message. See the error message supplemental spec for exact text.

If there is a Return date then the Special End date cannot be after the Return date. If it is, display a message. See the error message supplemental spec for exact text.

If there is not a Return date, then Special End date may be any value equal to or after Special Start date.

All of date and time fields are required for a special. If a Start date not entered, display a message. See the error message supplemental spec for exact text.

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### 38.4 System Exceptions

If not a valid month, day and year combination, the normal date in error message should be displayed. See the error message supplemental spec for exact text.

## 39. Special – End Time Area

### 39.1 Behavior

The end time area will be disabled until there is an entry into the end date area.

#### In locales where time is shown by AM PM designation:

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute and AM/PM designation, and a maximum of Hour Hour Minute Minute AM/PM designation, i.e. 945A, would designate 9:45 in the morning. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes **must** be two numeric values. The AM/PM designation of "A" or "P" must also be indicated. The user may enter delineating characters, but these will be removed before saving to the database.

#### In locales where time is shown by 24 hour designation:

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute, and a maximum of Hour Hour Minute Minute, i.e. 945 would designate 9:45 in the morning, 1425 would designate 2:25 in the afternoon. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes must be **two** numeric values. The user may enter delineating characters, but these will be removed before saving to the database.

### 39.2 Validation

#### In locales where time is shown by AM PM designation:

Time increments can range from 1200A to 1159A and from 1200P until 1159P. If an entry is not within these two ranges display a message to the user. See the error message supplemental spec for exact text.

#### In locales where time is shown by 24 hour designation:

Time increments can range from 0000 to 2400. If an entry is not within this range display a message to the user. See the error message supplemental spec for exact text.

### 39.3 Business Exceptions

The end time area will be disabled until there is an entry into the end date area.

### 39.4 System Exceptions

None identified at this time.

## 40. Special – End Time Drop Down

### 40.1 Behavior

The end time dropdown will be disabled until there is an entry into the end date area.

This drop down icon will display the time in 15-minute increments. When selected, it should be positioned to the ¼ hour increment immediately preceding the current time and format according to the locale's format.

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## 40.2 Validation

None identified at this time.

## 40.3 Business Exceptions

The end time dropdown will be disabled until there is an entry into the end date area.

## 40.4 System Exceptions

None identified at this time.

## 41. Special – Rate Area

### 41.1 Behavior

This is a numeric area.

### 41.2 Validation

None identified at this time.

### 41.3 Business Exceptions

Negative values may not be entered. If attempted, display message. See the error message supplemental spec for exact text.

### 41.4 System Exceptions

None identified at this time

## 42. Special – Rate Type Drop Down

### 42.1 Behavior

This is a drop down list. The domain values are Per Day Special and Package Special.

### 42.2 Validation

None identified at this time.

### 42.3 Business Exceptions

None identified at this time.

### 42.4 System Exceptions

None identified at this time

## 43. Special – Mileage Area

### 43.1 Behavior

This is a numeric area. This area will be disabled if the No Charge check box is selected. If not selected the area is enabled. It should default to enabled.

### 43.2 Validation

None identified at this time.

### 43.3 Business Exceptions

Negative values may not be entered. If attempted, display message. See the error message supplemental spec for exact text.

### 43.4 System Exceptions

None identified at this time.

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#### **44. Special – Mileage No Charge Check Box**

##### **44.1 Behavior**

If the No Charge Check Box is selected, then the Mileage area is set to zero and the area disabled.  
Unselecting the No Charge Check Box will enable the Mile area for entering values.

##### **44.2 Validation**

None identified at this time.

##### **44.3 Business Exceptions**

If there is unlimited mile in the normal rate then special mileage has to be unlimited. You can never have a special mileage charge if the normal rate is unlimited. If the user attempts to so this, display a message.  
See the error message supplemental spec for exact text.

##### **44.4 System Exceptions**

None identified at this time

#### **45. Discounts and Specials – Add a Discount Check Box**

##### **45.1 Behavior**

Selection of this check box will enable the “Discount %” input area.

##### **45.2 Validation**

None identified at this time.

##### **45.3 Business Exceptions**

None identified at this time.

##### **45.4 System Exceptions**

None identified at this time

#### **46. Discount – Discount Percent Area**

##### **46.1 Behavior**

This is a numeric area. Values should be entered without any decimals, i.e., a value of 8 would men 8%, a value of 20 would be 20%.

##### **46.2 Validation**

Values cannot contain decimals.

##### **46.3 Business Exceptions**

A discount cannot exceed the value of 50. If the user enters a value greater than 50, a message is displayed.  
See the error message supplemental spec for exact text.

##### **46.4 System Exceptions**

If a value is entered with decimals, a message is displayed. See the error message supplemental spec for exact text.

#### **47. Security**

The user must have the appropriate security level to access these screens. The user is allowed to view or print anything. It is when they attempt to edit a reservation that their security restrictions will be enforced.

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## **48. Special – Excess Mileage Charge**

### **48.1 Behavior**

This is a numeric area. Values should be entered without any decimals i.e. a value of 8 would mean .08 and a value of 20 would mean .20.

### **48.2 Validation**

Values cannot contain decimals .

### **48.3 Business exceptions**

### **48.4 System Exceptions**

If a value is entered that contains decimals, the system will display a message to the user. See the error message supplemental spec for exact text.

<Company Name>

## ECARS 2.0 - Driver Search Screen Action Specification

[illegible]



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## Revision History

Date	Version	Description	Author
05/31/2001	1.0	Created Document	Johnny S. Johnston
09/04/2001	1.1	Updated to reflect changes from Navigation use case.	James Atteberry
09/14/2001	1.2	Updated to include visual indication that renter is on do not rent list.	James Atteberry
10/08/2001	1.3	Replaced Renter Search screen shots with the versions that do not have print buttons.	Chris Carr

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## 11. Security

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# Screen Action Specification

## 1. Introduction

This document will describe the behavioral characteristics associated with the Driver Search screen.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

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## 2. Driver Search

Driver Search - blank result set - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help Address

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Driver Search**

Telephone Last Name First Name

Drivers License Number Date of Birth

Search Reset Cancel

Name	Address	Phone Number	Date of Birth
------	---------	--------------	---------------

Items 0 of 0 found Prev 1 Next

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Figure 1 – Driver Search – No Display List

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Driver Search - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help Address e

Reservation ~o Contracts ~t Callbacks ~k

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Driver Search** - Options - Go X

Telephone \_\_\_\_\_ Last Name \_\_\_\_\_ First Name \_\_\_\_\_

Drivers License Number \_\_\_\_\_ Date of Birth \_\_\_\_\_

Search Reset New Driver

Name	Address	Phone Number	Date of Birth
Atteberry, James	2002 Mateus Apt B, Maryland Heights	(444) 444-4444 (H) (314) 512-3479 (W)	11/20/1971
Bond, James	Classified, Unknown		
Doe, Jane	123 West Main, Anywhere		1/2/1943
! Jetson, George	5 Spacely, Apt 4, Sprockets	2135474798 ext 45678(W) 5417891234 (O)	
! Lobohecski, Steve			
Mathews, Mike			
Puiols, Albert			
Sattaligei Chakrasanthi			

Items 1 - 10 of 10 found Prev 1 Next

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Figure 2 – Driver Search – Result Display List

<Project Name>	Version: <1.0>
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Driver Search - Address sorted ascending - Microsoft Internet Explorer provided by Enterprise Rent-A-Car

File Edit View Favorites Tools Help Address

Reservation ~ Contracts ~ Callbacks ~

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Driver Search**

Telephone Last Name First Name

Drivers License Number Date of Birth

Search Reset Cancel

Name	Address	Phone Number	Date of Birth
Lobochevski, Steve			
Mathews, Mike			
Pujols, Albert			
Sattaluri, Chakravarthy			
Smith, Ozzie			
Vina, Fernando			
Doe, Jane	123 West Main, Anywhere		1/2/1943
Atteberry, James	2002 Mateus Apt B, Maryland Heights	(444) 444-4444 (H) (314) 512-3479 (W)	11/20/1971

Items 1 - 10 of 10 found Prev 1 Next

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Figure 3 – Driver Search – Sort Ascending on Address Column

<Project Name>	Version: <1.0>
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<document identifier>	

Driver Search - Address sorted descending - Microsoft Internet Explorer provided by Enterprise Rent-A-Car

File Edit View Favorites Tools Help Address

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Driver Search**

Telephone Last Name First Name

Drivers License Number Date of Birth

Search Reset Cancel

Name	Address	Phone Number	Date of Birth
Bond, James	Classified, Unknown		
! Jetson, George	5 Spacely, Apt 4, Sprockets	2135474798 ext 45678(W) 5417891234 (O)	
Atteberry, James	2002 Mateus Apt B, Maryland Heights	(444) 444-4444 (H) (314) 512-3479 (W)	11/20/1971
Doe, Jane	123 West Main, Anywhere		1/2/1943
! Lobochevski, Steve			
Mathews, Mike			
Puols, Albert			
Samsaloni, Chakrasanthu			

Items 1 - 10 of 10 found Prev 1 Next

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Figure 4 – Driver Search – Sort Descending on Address Column

### 3. Phone number

#### 3.1 Behavior

This search criteria area will be an alphanumeric field. It will not be formatted for presentation purposes. Returns exact matches for the characters entered. A phone number is considered to be the entire number including area code. Example: In the United States, it would be the 3 digit area code, plus the seven digit phone number. (Country Code is not considered a part of the phone number.) The search will be on all phone number fields associated with the Driver/Renter. Currently, these are Home, Office and Other. If the same phone number is found in multiple areas for the same driver, the driver will only be displayed once, but all associated phone numbers will be listed.

The phone number is considered to be a stand alone search criteria and a search may be executed with just that single piece of information.



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### 1. Frequent Renter

1. User will have a single field to enter an area code and phone number.
2. All special characters will be removed from the phone number criteria before the search begins.

### 3.2 Validation

None identified at this time.

### 3.3 Business Exceptions

None identified at this time.

### 3.4 System Exceptions

None identified at this time.

## 4. Last Name / First Name

### 4.1 Behavior

This search criteria area will be a text field containing an implied wildcard after the entered criteria. The First Name field will not be enabled until search criteria has been entered into the Last Name field. Thus, the First Name field will not be accessible via either the tab key or the mouse unless Last Name data is present.

It will return exact matches for the characters entered and will continue with other text strings that match the characters entered, but are of a longer length (an implied wildcard). Example: If the Last Name search criteria entered were "Smith", you would receive back every open ticket with "Smith" in the Last name. You would also receive every character string that matched "Smith" for the first 5 characters, but was longer than five characters. Given this, you would also receive, "Smither", "Smithson", "Smithy", etc. These longer character matches would be alphabetically ascending after the exact character matches of equal length. The First Name field behaves in the same manner.

It should be noted that Last Name and First Name when used in combination, are stand alone search criteria and a search may be executed with these two pieces of information.

### 4.2 Validation

First name area is disabled until there is data the last name area.

Only having data in the last name area is not sufficient to execute a search.

### 4.3 Business Exceptions

If only the last name area has data, and a search command is executed, then a message will be presented. See the "error message" supplemental spec for exact text.

### 4.4 System Exceptions

None identified at this time.

## 5. Driver's License Number

### 5.1 Behavior

This search criteria area will be an alphanumeric field. It will not be formatted for presentation purposes. Returns exact matches for the characters entered.

The Driver's license number is considered to be a stand alone search criteria and a search may be executed with just that single piece of information.

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## 5.2 Validation

None identified at this time.

## 5.3 Business Exceptions

None identified at this time.

## 5.4 System Exceptions

None identified at this time.

## 6. Date of Birth

### 6.1 Behavior

This search criteria area will be a numeric field. It will not be formatted for presentation purposes. The user may enter delineating characters, but these will be stripped out before searching the database to find an exact date match. There should be a calendar function available which would allow the user to select a date from a calendar icon, or similar feature, instead of entering a value. If the user selects a date from the calendar icons, it will be displayed in the date area formatted appropriately by the locale. (As determined for all locale specific formatting.)

### 6.2 Validation

It will be a valid month, day and year combination.

Only having data in the date of birth is not sufficient to execute a search.

### 6.3 Business Exceptions

If only the date of birth area has data, and a search command is executed, then a message will be presented. See the "error message" supplemental spec for exact text.

### 6.4 System Exceptions

If not a valid month, day and year combination, the normal date in error message should be displayed.

## 7. Results Display Area

### 7.1 Behavior

The result display will initially be blank on first presentation of the panel and until at least one search is executed and at least one record is found that matches the search criteria.

This display area provides the user with the search result list. The result list will be comprised of 4 static columns. The specific column order is:

- 1) The renter's last name and first name will be concatenated to form this column.
- 2) The renter's address.
- 3) Any and all phone numbers associated with the particular renter. Each phone number found will also display it's type, either Home, Work or Other.
- 4) The Renter's date of birth, formatted by locale.

The display presentation for each type of information will adhere to result list standards.

The default sort order is:

- 1) Renter last name and first name
- 2) Address.

The users would like to have the ability to sort the columns in both ascending and descending order. This will sort the entire result set. When a column is selected to sort, all other default or secondary sort criteria is abandoned. The manner in which Oracle sorts ascending and descending values will be used. The display

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area will position to the top of the entire result list based on the column selected to sort.  
If the user moves forward or backward within the result list, the sort will still be in effect. (Note: The  
phone number column is not sortable.)

If the Renter is on the Do Not Rent list, a red exclamation point should be placed before the Renter Name.

## 7.2 Validation

None identified at this time.

## 7.3 Business Exceptions

None identified at this time.

## 7.4 System Exceptions

None identified at this time.

# 8. Results Feedback Line Area

## 8.1 Behavior

This feedback area provides the user with the search result list count as well as list navigation. The user may select the block of records available as returned by the invoked search criteria. These blocks are identified by sequential numbers, along with a First (1<sup>st</sup> block of records) and Last (last block of records). Also appearing will be the Previous and Next. When negotiating through the result list the sequential numbers will change depending upon the block of records being viewed, other blocks of records can be accessed via the Previous and Next hyperlinks. The Previous and Next, and appropriate blocks, should be enabled or disabled according to the positioning of the list. For example, if the list were displaying the first set of several sets of records, the Previous function would be disabled. Similarly, if the list were displaying the last set of records the Next function would be disabled.

## 8.2 Validation

None identified at this time.

## 8.3 Business Exceptions

None identified at this time.

## 8.4 System Exceptions

Buttons and navigation areas would be enabled and disabled appropriately for position of result list display.

# 9. Button Line Area

## 9.1 Behavior

The Search image/button will invoke the search process, submitting the form to the server.

The Reset image/button will clear out the all of the search criteria data areas.

The Cancel image/button will take the user to the last panel accessed.

## 9.2 Validation

None identified at this time.

## 9.3 Business Exceptions

None identified at this time.

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#### 9.4 **System Exceptions**

There is a restraint of which search criteria can stand alone and on which a search may be executed.

- Phone number may stand alone as one search criteria.
- Driver's license number may stand alone as one search criteria.
- Last name and first name in combination, may stand alone as one search criteria.
- Last name and Date of birth may not stand alone as a search criteria and must be used in conjunction with another search criteria.

If the appropriate amount of search criteria is not entered, then a message will be presented to the user stating "Additional search criteria required".

#### 10. **Rules**

The Renter Name Last / First search criteria have an implied wild card character placed directly after the entered text, all other search criteria fields on this screen are to be treated as exact matches with searching.

There is a restraint of which search criteria can stand alone and on which a search may be executed.

- The phone number alone is may stand alone as one search criteria.
- Driver's license number is may stand alone as one search criteria.
- Last name and first name in combination, may stand alone as one search criteria.
- Last name and Date of birth many not stand alone and must be used in conjunction with another search criteria.

If not sufficient search criteria has been entered, then a message will be presented to the user stating "Additional search criteria required".

When there are not any matches to the input search criteria the user should be presented with a feedback message stating no items/records were found for the criteria entered.

If the search returns more reservations than can be displayed on the screen at one time, then the system needs to present to the user the range of records they are viewing out of the total number of records.

#### 11. **Security**

The user must have the appropriate security level to access this screen. The user is allowed to view or print anything. It is when they attempt to edit a reservation that their security restrictions will be enforced.

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# ECARS 2.0

## Screen Action Specification: Reservation Forecasting

Version 1.1

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## Revision History

Date	Version	Description	Author
05/15/2001	1.0	First Pass	Mike Pallia
5/17/2001	1.1	Revisions and added system exceptions, Data validation and the calendar control area.	Mike Pallia
09/04/2001	1.2	Updated to reflect changes from Navigation use case.	James Atteberry
10/03/2001	1.3	Added screen shot of Reservation Pilot version	James Atteberry
10/26/2001	1.4	Clarified Branch list functionality for Pilot Reservation	James Atteberry

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## Screen Action Specification

### 1. Reservation Forecasting

This document shows the interactions a user will have when navigating through the Reservation Forecasting Screen.

### 2. Reservation Forecasting Screen Shot

This is the final screen shot (approved by the business)

Reservation Forecasting - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

Reservation Controls Callbacks

Detail Summary **Forecasting** Notification Search

Reservation Forecasting Starting on: 5/13/2001 (MM/DD/YYYY)

Group: 01 - St. Louis Branch: The First Branch

May 25, 2001 through June 7, 2001

Previous 14 Days Next 14 Days

Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday
May 25	May 26	May 27	May 28	May 29	May 30	May 31
12	5		25	27	18	15
June 1	June 2	June 3	June 4	June 5	June 6	June 7
13	4		32	18	17	16


Refresh New Reservation

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Reservation Forecasting - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help Links 

Reservation Contracts Callbacks

Detail Summary **Forecasting** Notification Search

Reservation Forecasting Starting on: 5/13/2001 (MM/DD/YYYY)

Group: 01 - St. Louis Branch: The First Branch

May 25, 2001 through June 7, 2001

Previous 14 Days Next 14 Days

Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday
May 25	May 26	May 27	May 28	May 29	May 30	May 31
12	5		25	27	18	15
June 1	June 2	June 3	June 4	June 5	June 6	June 7
13	4		32	18	17	16

Refresh New Reservation

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Reservation Forecasting screen – Reservation Pilot version

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## 2.1 Group Area

### 2.1.1 Behavior

This will be a combo box that displays a current list of all Rental groups within the Peoplesoft hierarchy.

The list will be:

- Sorted in alphabetical order ascending .
- The selection of "All" is NOT included
- The selection of "Blank" is NOT included (A group must be chosen ).
- The items appearing in the list are static (the user cannot add items to the list dynamically)

The users would also like to have the ability to type a character, alpha or numeric, into the combo box area and have the focus within the list position to the character entered. (If the user enters an "H" the drop down list would position to the first string beginning with "H" in the list ) Upon initial presentation of the panel, this area should default to the group associated to the physical terminal's location. For reservation pilot, the user will not be able to change the Group Value.

### 2.1.2 Validation

None identified at this time.

### 2.1.3 Business Exceptions

None identified at this time.

### 2.1.4 System Exceptions

None identified at this time.

## 2.2 Branch Area

### 2.2.1 Behavior

This will be a combo box that displays a current list of all Rental Branches within the Peoplesoft hierarchy that are associated with the selected Group.

The list will be:

- Sorted in alphabetical order ascending .
- The selection of "All" is NOT included
- The items appearing in the list are static (the user cannot add items to the list dynamically)

The users would also like to have the ability to type a character, alpha or numeric, into the combo box area and have the focus within the list position to the character entered. (If the user enters an "H" the drop down list would position to the first string beginning with "H" in the list)

Upon initial presentation of the panel, this area should default to the Branch associated to the physical terminal's location . If the user selects a new Group, the branch area will be set to "blank" . When the user selects a new Branch, the system will initiate a refresh using the new Group/Branch selected by the user . For Pilot Reservation, the Branch list will NOT contain a blank entry.

### 2.2.2 Validation

None identified at this time

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### 2.2.3 Business Exceptions

If a user does has a "blank" branch selected and attempts to refresh the list, an error message will be presented. See the "error message" supplemental spec for exact text.

### 2.2.4 System Exceptions

None identified at this time.

## 2.3 New Start Date Area

### 2.3.1 Behavior

This area will be a text field that will allows the user to enter the date for which they want to start the 14-day period . Upon initial presentation of the panel this field should be set to the current date . As soon as the user enters another date in this field, the refresh button should be selected. A refresh will be initiated when the user hits enter .

### 2.3.2 Validation

The valid date format that must be entered is :

- 8 numeric characters in the formant of mmdyyy in North America
- 8 numeric characters in the formant of ddmmyyy in Europe
- Any Non-Numeric Characters will be stripped out

Date Validation will occur when the user submits the form. If the date is not valid, the system will display the error "Please enter a valid date".

### 2.3.3 Business Exceptions

If a user does not enter a date, or blanks out this area, and attempts to refresh the list, an error message will be presented. See the "error message" supplemental spec for exact text. "

### 2.3.4 System Exceptions

None identified at this time.

## 2.4 Calendar Control Area

### 2.4.1 Behavior

When selected, the user will be shown a monthly calendar and the user can click on a particular day . The control will then populate the date selected in to the field. (As outlined in the HTML standards for Calendar Controls.)

### 2.4.2 Validation

See HTML standards for calendar controls

### 2.4.3 Business Exceptions

See HTML standards for calendar controls

### 2.4.4 System Exceptions

See HTML standards for calendar controls

## 2.5 2 week period area

### 2.5.1 Behavior

The display area will visually show a 2-week (14 day) period to the user . The display will show the day of week, the day (numerically) and the total number of reservations for each day within the 2-week period . Initially, the first day within the 2-week period will be the current day and will continue for the next 13 consecutive days. A hyperlink will be available on the total number of reservations number . When the user selects the hyperlink, the user will be taken to a list of that day's reservations. See the Daily Reservation Detail Use case for more details .

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Other aspects of the 2-week period:

- If a day within the 2-week period has no reservations, the system will display nothing for that day .
- To help distinguish weekdays from weekend days, the table will display the weekend day names differently than the weekday day names .

## 2.5.2 Validation

None identified at this time

## 2.5.3 Business Exceptions

None identified at this time

## 2.5.4 System Exceptions

None identified at this time

## 2.6 Table Header Area

### 2.6.1 Behavior

The Table header area will display a textual representation of the current start date and end date of the 2-week period. For example, if the start date was 5/14/01 and the end date was 5/28/01, the table header area would be presented like this: "May 14, 2001 to May 28, 2001" . This header will change whenever the system or user selects a different start date . This header will reflect the dates that are included in the 2-week period area.

### 2.6.2 Validation

None

### 2.6.3 Business Exceptions

None

### 2.6.4 System Exceptions

None

## 2.7 Next and Previous Area

### 2.7.1 Behavior

The next and previous button/image area will be displayed to the user. When the user select the next button/image, the system will calculate and display the next 2-week period which starts on the last day of the current 2-week period that is displayed . When the user selects the previous button/image, the system will calculate and display the previous 2-week period that starts 13 days prior to the current start date that is displayed.

### 2.7.2 Validation

None

### 2.7.3 Business Exceptions

None

### 2.7.4 System Exceptions

If the system encounters any processing errors accessing the database, the system will display an error to the user that the data is unavailable .

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## 2.8 Button Line Area

### 2.8.1 Behavior

The Refresh image/button will redisplay the 2-week period to reflect the most current data . The refresh will use the same start and end dates as well as the same Group/Branch that has been selected .

The New Reservation button will create a new reservation, changing the screen to that reservation.

### 2.8.2 Validation

None

### 2.8.3 Business Exceptions

None

### 2.8.4 System Exceptions

If the system encounters any processing errors accessing the database, the system will display an error to the user that the data is unavailable.

## 3. Rules

- The system will not include any inactive or voided reservations .

### 3.1 Security

#

## ECARS 2.0 - Reservation Notification Screen Action Specification

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Supplementary Specification	Date: <dd/mm/yy>
<document identifier>	

## Revision History

Date	Version	Description	Author
04/24/2001	1.0	Created Document	Johnny S. Johnston
05/04/2001	1.1	Updated and included screen shots	Johnny S. Johnston
09/04/2001	1.2	Updated to reflect changes from Navigation use case.	James Atteberry
10/10/2001	1.3	Updated screen shot to reflect current image.	James Atteberry

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## Reservation NotificationScreen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the ARMS Notification, and its related screens.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. ARMS Notification – Most Critical and Less Critical

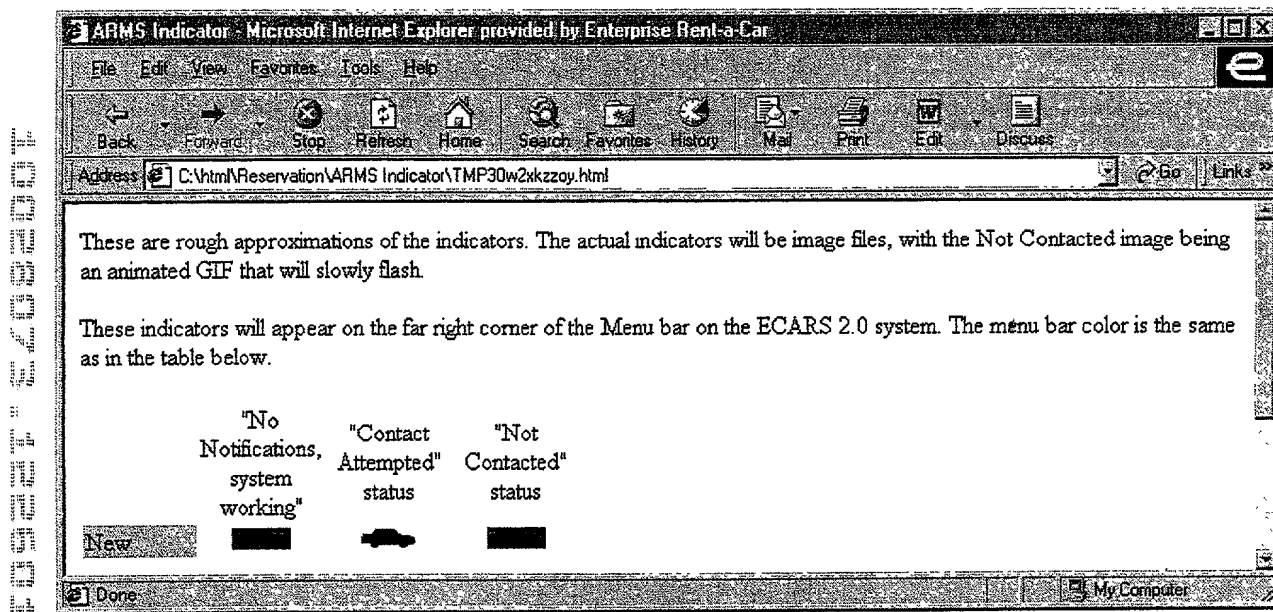


Figure 1 – Most Critical and Less Critical

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### 3. ARMS Notification – Result Display List

ARMS Indicator V2 - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

RESERVATION      CALLBACKS

Detail   Summary   Forecasting   **Notification**   Search

#### Reservation Notification

Pick-up Date	Pick-up time	Renter Name	Bill-To Account Name	Date Reservation Created	Time Reservation Created	Reservation Number
04/03/01	8:30 AM	Atteberry, James	Honest Bob's Collision Repair and Gun Store	02/28/01	11:35 AM	123456
04/10/01	8:30 AM	Snuffitelli, Joe	Firestone	02/27/01	2:31 PM	234567
04/10/01	9:45 AM	Smart, Maxwell	Classified	03/05/01	7:30 AM	345678
		Johnston, Christine	Carl's Auto	04/29/01	3:15 PM	BG43W2
04/01/01	6:45 AM	Doe, Jane	Fleecem Insurance	04/01/01	6:40 AM	456789
04/02/01		Yeager, Chuck	USAF	04/02/01	1:23 PM	MACH01
04/02/01	1:45 PM	Lobochevski, Steven	No Problem Coverage	04/02/01	12:00 PM	567890
04/03/01	2:30 PM	Allen, Roger	Pooh Insurance	04/03/01	11:30 AM	D54Q87

Reservations in **Bold** are a priority.

Total number of reservations: 10

Res - 411781   Tkt - 234567   Cbk - 363221

Figure 2 – Result List Display

### 4. Initial Notification

#### 4.1 Behavior

Once a user has signed onto the ECARS 2.0 Rental Application, there must be something that is operating that is able to recognize and trigger a notification to the user that a particular type of reservation has been added to the Oracle database.

- For all North American rental locations and call center locations, the notification is displayed when a reservation is added to the Oracle database that has an ARMS origin and the Pick-up Group/Branch equals the physical terminal's Group/Branch.
- For European terminals, whenever a reservation's pick-up location has changed from Group/Branch UK9Z to any other valid Group/Branch Number. Once the pick-up group/branch

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number change is committed to the database, the notification will display to the new Group/Branch location. (Not UK9Z).

- For Pilot Reservation ONLY, no notification image will be present on non-North American screens.

The notification indicators will appear on the far right corner of the Menu bar on the ECARS 2.0 system . The notification should be displayed on each terminal that is associated to the Physical location's Group/Branch Number

The notifications will look like this (see diagram): 1) The "Not Contacted" notification will be a rectangle with a red border and a black car. The image will blink by changing the background color and the car color. . 2) The "Contact Attempted" notification will be identical in size to the "Not Contacted" notification, but the background color is yellow. . 3) The "Contacted" notification will be identical in size to the others, but the background is green. .

Note: The intent is to design a scalable notification method/system that can be expanded in the future which would allow notification(s) to be displayed to the user based on different elements or pieces of information contained on a reservation or contract.

## 4.2 Validation

The system needs to determine which terminal is associated with a specific group, and branch (based on physical location) so it will be able to route the notification to the proper terminal(s) based on the reservation's pick-up branch location . (Example: the system will have to know all terminals located at the Hazelwood branch in north St. Louis county in order to send the appropriate notification to those terminals when an ARMS reservation is made, with a contact status of Not Contacted, with the pick-up branch being that Hazelwood branch).

It will also have to determine if the branch is located in North America or Europe, (Again, probably expended to be by country, or other geographical locations, in the future). This is currently needed as North America will key off the Branch origin of ARMS, for their notifications, and the UK will key off of a specific branch number UK9Z. It is possible that this could be multiple branches (or what-ever is the notification key) in the future, so this feature needs to be expandable.

For the immediate design, there will be a "contact status" associated with the ARMS reservations. The valid domain for contact status is:

- Not Contacted
- Contact Attempted
- Contacted

It is the value of the contact status, which determines the magnitude of criticality or degree of annoyance of the notification.

A value of "Not Contacted" should display the notification with the greatest magnitude of criticality or greatest degree of annoyance.

A value of "Contact Attempted" should display the notification with a lesser magnitude of criticality or lesser degree of annoyance.

A value of "Contacted" should display the notification with no magnitude of criticality or annoyance.

The user may elect to acknowledge the notification or not acknowledge the notification.

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If the user does not acknowledge the notification, it always remains visible to the user, in the persistent state, but no further action is required .

If the user acknowledges the notification the, system displays a list of all of the reservations, which prompted the notification. In North America this will be ARMS reservations, in Europe this will be those reservations with a branch origin of UK9Z. See the Results Display Area, below, for behavior after the user acknowledges the notification.

#### 4.3 Business Exceptions

None identified at this time.

#### 4.4 System Exceptions

The system would provide an error message of "Reservation notification system not available" if the notification system is down or not available for use . The error messages will be tailored and applicable to what the notification applies in other countries and locales.

### 5. Results Display Area

#### 5.1 Behavior

The user has acknowledged the notification. As such, the system displays a list of all of the reservations, which prompted the notification. In North America this will be ARMS reservations, in the UK this will be those reservations with a branch origin of UK9Z.

For Pilot Reservation ONLY, this screen will not be available to non-North American users.

The reservation information displayed will be:

1. Pick-up Date
2. Pick-up Time
3. Renter Name – Concatenated Last Name, First Name
4. Bill-To Account Name
5. Reservation Creation Date
6. Reservation Creation Time
7. Reservation Number

All appropriately formatted by locale. The display presentation for each type of information will adhere to result list standards.

The information will be initially sorted and displayed by:

Contact Status – All of those with a status of Not Contacted will appear before those with a status of Contact Attempted.

The Not Contacted status reservation information should be in a bolder, or larger font, than the Contact Attempted status reservation information. (Or any other method that would make the Not Contacted status of reservations immediately obvious from the reservations with a status of Contact Attempted.)

Within each contact status, the information will be sorted and displayed by:

1. Pick-up Date – In numerical ascending order.
2. Pick-up Time – In numerical ascending order.

For date and time sorting the following will be the standard:

1. Reservations with a date, but no time.
2. Reservations with a date and a time.

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3. Reservation with no date, but have a time.
4. Reservations with no date and not time.
3. Renter's Name – In alphabetical ascending order.

All appropriately formatted by locale. The display presentation for each type of information will adhere to result list standards.

Once the results list has been populated with one or more reservations, the user should:

1. Have the ability to sort any of the columns displayed in both ascending and descending order. This will only sort the entire result set . It will sort ascending or descending on the column selected with out any implied or defaulted secondary sort criteria. If the user moves forward or backward within the result list the sort will continue as the entire result list has been sorted.
2. Have the capability to indicate or select an individual reservation from the result list, and perform a simple task, (a function button, icon, mouse click) which would then open the reservation for editing purposes. Within this display list the user would select a link from the Renter Name column to edit the reservation . This would be contingent upon the user having the appropriate security to edit the reservation selected. This functionality will be consistent and standard throughout the application.

For all additional behavior associated with the result display list, refer to the Edit a Reservation Use Case and Behavior Document.

## 5.2 Validation

None identified at this time

## 5.3 Business Exceptions

None identified at this time

## 5.4 System Exceptions

None identified at this time.

## 6. Button Line Area

### 6.1 Behavior

The Refresh button will reload the data and display according to the default rules.

The New Reservation button will create a new reservation, changing the screen to that reservation.

### 6.2 Validation

None identified at this time.

### 6.3 Business Exceptions

None identified at this time.

### 6.4 System Exceptions

None identified at this time.

## 7. Subsequent ARMS Notification System Behavior

(This will be defined in greater detail within the Edit/View Behavior Documents)

Behavior to consider after a user edits a reservation.

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It is envisioned that once a user selects a reservation for editing, before they will be able to save or exit the reservation, they must respond to some sort of dialog box, which will pose some question in the form of:

1. Has the renter has been contacted? With a Yes, No check box or option area.
2. Has an attempt been made to contact the renter? With a Yes, No check box or option area.

Based on the results or answers to the questions, the values in the particular reservation's contact status may be changed which will require the notification process to monitor and reflect these changes, and adjust the magnitude of annoyance of the notification according, if needed, as described previously.

The exact behavior and what responses drive the changing of what values of the contact status, will be described as part of the Edit A Reservation development process.

## 8. Security

**<Company Name>**

## ECARS 2.0 - Notes Information Screen Action Specification

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	

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## Revision History

Date	Version	Description	Author
07/09/2001	1.0	Created document	Marty Tichy
07/31/2001	1.1	Identified requirements and created hierarchies.	Johnny S. Johnston
08/31/2001	1.2	Updated to reflect changes from Navigation use case	James Atteberry
11/06/2001	1.3	Updated with new screen shot and removed the "Print Current Page" requirement.	Chris Carr
11/09/2001	1.4	Described German translation difference for 'ARMS Msg' column heading.	Chris Carr
11/20/2001	1.5	Notes text field in summary list is limited at 80, not 90, characters. Anything after that is represented by an ellipse (...).	Chris Carr
11/29/2001	1.6	Changed list of Callback types. Also changed when note is entered from type "callback" to "manual"	David Beebe



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## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Notes screen.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Reservation Notes Screens

Notes - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Reservation: NO Contracts: T Callbacks: CK

**Notes** - Options - Go X

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

Type: ALL Status: ALL

Date/Time	Note	Status	Note Type	Created By	ARMS Msg
07/03/2001 3:22PM	Car is at Joe's Garage	CLOSE	CALLBACK	ECARS 2.0 USER	
07/02/2001 2:22PM	Does not like red cars. This shows the first two lines of the notes section.(2 @ 45 char)...	OPEN	SYSTEM	SYSTEM	SENT
07/01/2001 1:22PM	Reservation Created	RESERVATION	SYSTEM	SYSTEM	SENT

Print All Records Add Note

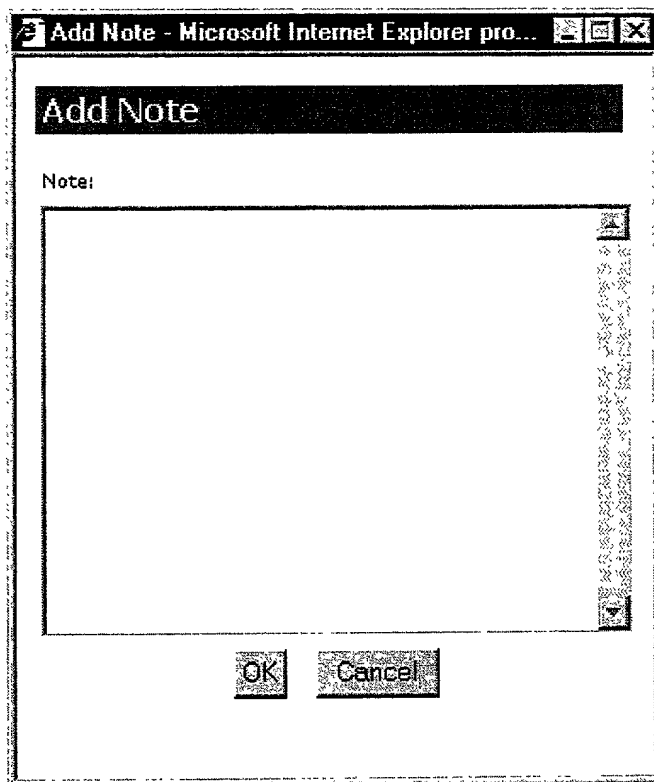
Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

keycode=9 Local Intranet

Figure 1 – Notes

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**Figure 2 – Add Note**

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<document identifier>	

**View Note**

Date: 7/02/2001 2:22PM  
Status: Open  
Type: System  
Created By: System  
Arms Msg: Sent  
Note:

Does not like red cars. This shows the first two lines of the notes section. (2 @ 45 char)

The text area shown here is big enough to show the entire database field without scrolling.

Print Close

Figure 3 – View Note

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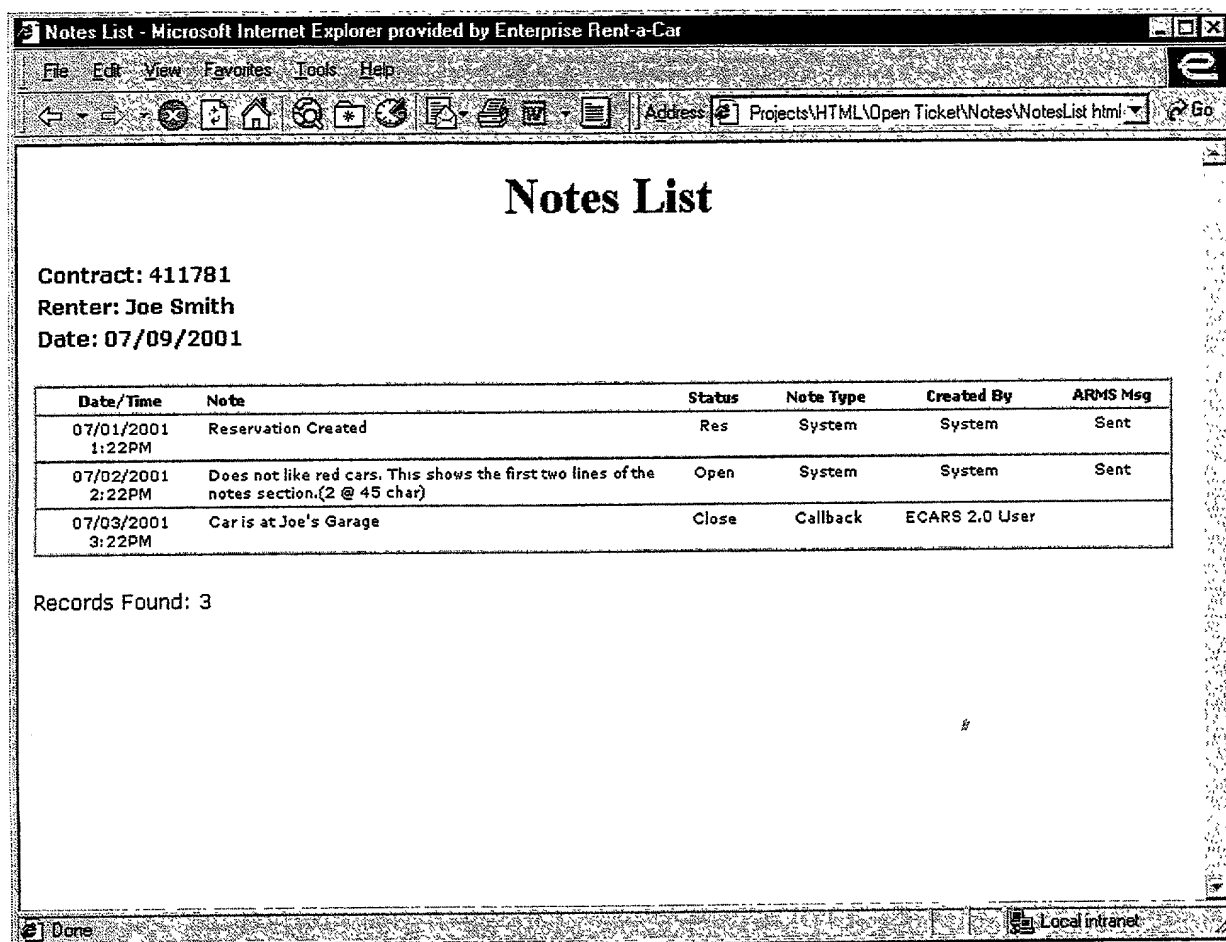


Figure 4 – Print All Records

### 3. Reservation Notes Screen

#### 3.1 Reservation Number

##### 3.1.1 Behavior

This area shows the unique reservation number that has been assigned to the newly created reservation. The reservation number is 6 alphanumeric characters long. If another reservation is open, its reservation number will be displayed in this area as well. The user will have the ability to have up to 3 reservations open at a time. A hyperlink will be available on the reservation numbers of the reservations that are NOT currently being displayed. For the reservation that is currently displayed, the reservation number will not have a hyperlink available. This is to allow the user to navigate between the open reservations.

##### 3.1.2 Validation

None identified at this time.

##### 3.1.3 Business Exceptions

If the user tries to open a 4<sup>th</sup> reservation, the system will display a message stating, "A maximum of 3 reservations may be displayed."

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#### 3.1.4 *Systems Exceptions*

None identified at this time.

### 3.2 Notes Title Bar Area

#### 3.2.1 Behavior

The open area in the Notes Title Bar will allow the user to access transaction-wide functions. These functions for Reservation are: -- Options --, Print, Void and Transfer. The default option is "--Options --". The user must press the Go button to initiate the selected function.

The Title Bar Button area in the Notes Title Bar contains two buttons – a Go button and a Close button.

The Go button is always active, and is used to initiate a function selected in the Options area. If the selected option is "--Options --", nothing should happen.

The Close button is always active, and is used to close the current transaction. The button is labeled with an 'X'. Pressing this button will cause a confirmation popup, asking the user if they wish to cancel the transaction and lose all changes. If the user selects 'No', they are returned to the same screen. If the user selects 'Yes', the transaction is closed with no changes saved to the database.

#### 3.2.2 *Validation*

None identified at this time.

#### 3.2.3 *Business Exceptions*

None identified at this time.

#### 3.2.4 *System Exceptions*

None identified at this time.

### 3.3 Button Line Area

#### 3.3.1 Behavior

The Previous button will take the user to the Notes screen within the same transaction.

The Next button will take the user to the Referral screen within the same transaction.

The Complete button will initiate a save of the transaction. All validations will be performed, returning any errors to the user. If there are no errors, the transaction will be saved, and the user is returned to the Reservation Home Page.

#### 3.3.2 *Validations*

None identified at this time.

#### 3.3.3 *Business Exceptions*

None identified at this time.

#### 3.3.4 *System Exceptions*

None identified at this time.

### 3.4 Type

#### 3.4.1 Behavior

This is a drop down field containing the following domain values:

- All

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<document identifier>	

- Bill To
- Callback
- Manual
- Renter
- Reservation
- Shop
- System

The default value is "All". The summary list is filtered by the item selected from the values list. The Status drop down list should be taken into consideration when filtering the summary list.

### 3.4.2 *Validation*

No validation is necessary.

### 3.4.3 *Business Exceptions*

None have been identified at this time.

### 3.4.4 *System Exceptions*

None have been identified at this time.

## 3.5 Status

### 3.5.1 Behavior

This is a drop down field containing the following domain values:

- All
- Reservation
- Open
- Close

The default value is "All". The summary list is filtered by the item selected from the values list. The Type drop down list should be taken into consideration when filtering the summary list.

### 3.5.2 *Validation*

No validation is necessary.

### 3.5.3 *Business Exceptions*

None have been identified at this time.

### 3.5.4 *System Exceptions*

None have been identified at this time.

## 3.6 Summary List

### 3.6.1 Behavior

The result list, as describe in the use case, will have a static column display sequence. All columns need to have the capability to be sorted, ascending and descending. The user selects a Contract by clicking on the hyperlink associated with the desired data row. The summary list will be populated with the latest note appearing first and the earliest note appearing last (descending order sorted by date/time).

An ellipse (...) should be placed at the end of the note text field if the verbiage contained in the note exceeds 80 characters.

The user must have the appropriate security to view/edit the contract selected.



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This list contains the application standard for lists regarding sorting by column.

The 'ARMS Msg' column header does not directly translate for Germany; rather, it is 'ARMS'.

### 3.6.2 *Validation*

None have been identified at this time.

### 3.6.3 *Business Exceptions*

None have been identified at this time.

### 3.6.4 *System Exceptions*

None have been identified at this time.

## 3.7 **Button Line Area**

### 3.7.1 *Print All Records button*

#### 3.7.1.1 *Behavior*

The Print All Records button will essentially generate an html report and send it to the printer. This will allow the user to print the entire collection of notes associated with a contract. This report will not be sent to the screen, it will only be sent to the printer.

#### 3.7.1.2 *Validation*

No validation is necessary.

#### 3.7.1.3 *Business Exceptions*

None have been identified at this time.

#### 3.7.1.4 *System Exceptions*

None have been identified at this time.

### 3.7.2 *Add Note button*

#### 3.7.2.1 *Behavior*

The Add Note button will display the Add Note screen for data input.

#### 3.7.2.2 *Validation*

No validation is necessary.

#### 3.7.2.3 *Business Exceptions*

None have been identified at this time.

#### 3.7.2.4 *System Exceptions*

None have been identified at this time.

## 4. **Add Note Screen**

### 4.1 **Note**

#### 4.1.1 *Behavior*

This is a free form text field in which the user may enter data.

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#### 4.1.2 Validation

There must be data present in order for the note to be saved.

#### 4.1.3 Business Exceptions

None have been identified at this time.

#### 4.1.4 System Exceptions

None have been identified at this time.

### 4.2 Button Line Area – Add Note

#### 4.2.1 OK button

##### 4.2.1.1 Behavior

If data is not present in the Notes text field the feedback message reads, “Please enter a Note if selecting to Save.” Two options are presented, OK and Cancel. Ok will take the user back to the Add Note screen for data entry, Cancel will dismiss the Add Note screen.

Ok will be the default selection.

The application saves the Date/Time, Status, Type, Note text and Created By data at the time the note is committed to the database.

Type = Manual

Status = contract status as of note creation

##### 4.2.1.2 Validation

There must be data present in the Notes text field.

##### 4.2.1.3 Business Exceptions

None have been identified at this time.

##### 4.2.1.4 System Exceptions

None have been identified at this time.

#### 4.2.2 Cancel button

##### 4.2.2.1 Behavior

This button will dismiss the Add Note screen without saving any data.

##### 4.2.2.2 Validation

If data has been entered the following feedback message is displayed: “Are you sure you want to exit and lose the entered information?”. Two options are presented, Yes and No. Yes will dismiss the screen and not save the data, No will take the user back to the Add Note screen.

The default button selection is “No”.

##### 4.2.2.3 Business Exceptions

None have been identified at this time.

##### 4.2.2.4 System Exceptions

None have been identified at this time.

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## 5. **View Note Screen**

This is a read only screen.

### 5.1 **Data**

#### 5.1.1 **Behavior**

This is a listing of the values associated with the selected note, this includes:

- Date/Time
- Status
- Type
- Created By
- Arms Message Status
- Note text

The Note text field should be large enough to display the entire 510 characters as defined in the database.

#### 5.1.2 **Validation**

No validation is necessary.

#### 5.1.3 **Business Exceptions**

None have been identified at this time.

#### 5.1.4 **System Exceptions**

None have been identified at this time.

### 5.2 **Button Line Area – View Note**

#### 5.2.1 **Print button**

##### 5.2.1.1 **Behavior**

This button will essentially print a screen print of the View Note screen.

##### 5.2.1.2 **Validation**

There must be data present in the Notes text field.

##### 5.2.1.3 **Business Exceptions**

None have been identified at this time.

##### 5.2.1.4 **System Exceptions**

None have been identified at this time.

#### 5.2.2 **Close button**

##### 5.2.2.1 **Behavior**

This button will dismiss the View Note screen.

##### 5.2.2.2 **Validation**

None have been identified at this time.

##### 5.2.2.3 **Business Exceptions**

None have been identified at this time.

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#### 5.2.2.4 System Exceptions

None have been identified at this time.

## 6. Rules

### 6.1 Required Fields

The Note text field is required for creating a note. Feedback messages will be presented, as defined previously in this document, when attempting to save a note without the required information.

### 6.2 Saving

A note must be defined before the data can be saved to the database.

## 7. Security

The user must have the appropriate security level to access this screen.

CONFIDENTIAL

---

<Company Name>

---

## ECARS 2.0 - Referral Source Screen Action Specification

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<document identifier>	

## Revision History

Date	Version	Description	Author
6/21/2001	1.0	Created Document	Johnny S. Johnston
7/13/2001	1.1	Updated for OO modeler review	Johnny S. Johnston
8/8/2001	1.2	Updated for contact requirement changes	Johnny S. Johnston
9/6/2001	1.3	Updated wording from Telephone Number to Phone Number.  Changed Phone Number column from sortable to not sortable.	L. Moellman
10/08/2001	1.4	Replaced Account and Employee Search screen shots with the versions that do not have print buttons.	Chris Carr

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## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Referral Source screens.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Referral Source Screen

The screenshot displays the 'Referral Source' screen within the 'Enterprise ECARS Application'. The interface includes a top navigation bar with tabs for 'Reservation', 'Tickets', 'Callbacks', 'Vehicle', 'Tools', and 'Help'. A left sidebar contains a vertical menu with options: 'DRIVERS', 'REFERRAL' (highlighted), 'DATES/RATES', 'BILL-TO', 'VEHICLE/SHOP', and 'NOTES'. The 'NOTES' section indicates 'Notes Taken : 1'. The main content area is titled 'Referral Source' and features a 'Referral' section with two radio buttons: 'Account' (selected) and 'Employee Number'. Under the 'Account' section, there are four input fields: 'Account Name' (a dropdown menu showing '-Select-'), 'Account Number' (a text field), 'Contact Name' (a dropdown menu showing '-Select-'), and 'Phone Number' (a text field). A 'New Contact' button is positioned next to the 'Contact Name' field. Below the 'Employee Number' field is a 'Search' button. At the bottom of the main content area, there are three buttons: 'Previous', 'Next', and 'Complete'. The bottom left corner of the screen displays 'Res - 109HHF'.

Figure 1 – Referral Source Screen

Figure 2 – Referral Source Screen (Employee selected)

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Referral - Employee - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Reservation Carriers Callbacks

**DRIVERS**

James Atteberry

Additional Drivers: 2

**REFERRAL**

Account Name

Contact Name

**DATES/RATES**

08/27/2001; ECAR

Daily Rate; ASD

**BILL-TO**

Account Name

Contact Name

**VEHICLE/SHOP**

1997 Dodge Avenger

Shop Account Name

**NOTES**

Notes Taken: 1

Changed:

**Referral Source**

Referral

☐ Account

Account Name Account Number

Select

Account Name	Customer Number	Account Type	Owning GP/BR	Address	City	State	Zip	Phone Number
A Collector's Bookstore**	GE1638	Corporate	0101	6275 Delmar	St. Louis	MO	63130	(314) 721-6127
A.f.j. Remodeling Co.**	GE1225	Corporate	0102	312 Oak Pk. Village Dr.	Wildwood	MO	63040	(636) 458-1552
Accent Lincoln-mercury**	129498	Dealership	0103	9700 Manchester Rd	St. Louis	MO	63119	(314) 968-5300
Advantage Decorating**	GE0853	Corporate	0104	1601 North 7th St.	St. Louis	MO	63102	(314) 436-1419
African Amer. Rite Of Passage**	GE1538	Corporate	0105	325 Debaliviere	St. Louis	MO	63112	(314) 361-2268
Ahmad Bogossian**	GE0830	Corporate	0106	7743 Arthur	St. Louis	MO	63117	(314) 645-3076
Aig-cs**	GE0238	Corporate	0107	120 S Central, Ste 300	St. Louis	MO	63105	(000) 000-0000
Al-pac, Inc.**	GE1350	Corporate	0108	18535 Old Hwy 66	Pacific	MO	63069	(636) 271-8222
Albertin Auto Body Inc**	G08868	Bodyshop	0109	8449 Page	St. Louis	MO	63130	(314) 423-9924
Allen*lynette*	E75477	Employee	0110	600 Glen Addie	Shiloh	IL	62221	(314) 863-0055

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

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E3846G 0101 Enterprise ECARS Application - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

Reservation Tickets Callbacks Vehicle Tools Help

**DRIVERS** **Referral Source** - Options - Go X

Referral

Account: Account Name: Account Number:

-Select- -Select-

Contact Name: Phone Number

-Select- New Contact

Employee Number

Search

Referral Detail

Previous Next Complete

Notes

Notes Taken : 1

Res - 109HHF

Figure 3 – Referral with Branch Short List

<Project Name>	Version: <1.0>
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Account Search - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help Address

Reservation Contracts Callbacks

### Account Search

Group:  
01 - St Louis

Account Name Account Phone Number Account Type  
All

Search Reset Back

Account Name	Account Number	Account Type	Driving CP/BR	Account Address	City	State	Zip	Phone Numbers
A Collector's Bookstore**	GE1658	Corporate	0101	6275 Delmar	St Louis	MO	63130	(314) 721-6127
Afri. Remodeling Co**	GE1225	Corporate	0102	312 Oak Pk. Village Dr.	Wildwood	MO	63040	636 458-1552
Accent Lincoln-mercury**	129498	Dealership	0103	9700 Manchester Rd	St Louis	MO	63119	(314) 968-5300
Advantage Decorating**	GE0853	Corporate	0104	1601 North 7th St.	St Louis	MO	63102	(314) 436-1419
African Amer. Rite Of Passage**	GE1538	Corporate	0105	325 Deballviere	St Louis	MO	63112	314 3612268
Ahzad Bogosian**	GE0830	Corporate	0106	7743 Arthur	St Louis	MO	63117	(314) 645-3076
Aig-cs**	GE0238	Corporate	0107	120 S Central, Ste 300	St Louis	MO	63105	(000) 000-0000
Al-pac, Inc.**	GE1350	Corporate	0108	18535 Old Hwy 66	Pacific	MO	63069	(636)271-8222
Albertin Auto Body Inc**	G08868	Bodyshop	0109	8449 Page	St Louis	MO	63130	(314) 423-

Items 1 - 66 of 66 found Prev 1 2 3 4 5 Next

Res - 411781 Tkt - 234567 Cbk - 363221

Done Local intranet

Figure 4 – Account Search Screen

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Account Search - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help Address

Reservation Contracts Callbacks

### Account Search

Group:  
01 - St. Louis

Account Name Account Phone Number Account Type  
All

Search Reset Back

Account Name	Account Number	Account Type	Dorming GP/BR	Account Address	City	State	Zip	Phone Numbers
A Collector's Bookstore**	GE1658	Corporate	0101	6275 Delmar	St. Louis	MO	63130	(314) 721-6127
Affix Remodeling Co**	GE1225	Corporate	0102	312 Oak Pk. Village Dr.	Wildwood	MO	63040	636 458-1552
Accent Lincoln-mercure**	129498	Dealership	0103	9700 Manchester Rd	St. Louis	MO	63119	(314) 968-5300
Advantage Decorating**	GE0853	Corporate	0104	1601 North 7th St.	St. Louis	MO	63102	(314) 436-1419
African Amer. Rite Of Passage**	GE1538	Corporate	0105	325 Debaliviere	St. Louis	MO	63112	314 3612268
Ahzad Bogosian**	GE0830	Corporate	0106	7743 Arthur	St. Louis	MO	63117	(314) 645-3076
Alg-co**	GE0238	Corporate	0107	120 S Central, Ste 300	St. Louis	MO	63105	(000) 000-0000
Al-pac, Inc.**	GE1350	Corporate	0108	18535 Old Hwy 66	Pacific	MO	63069	(636) 271-8222
Albertin Auto Body Inc**	G08868	Bodyshop	0109	8449 Page	St. Louis	MO	63130	(314) 423-

Items 1 - 66 of 66 found Prev 1 2 3 4 5 Next

Res - 411781 Tkt - 234567 Cbk - 363221

Done Local intranet

Figure 4.1 – Account Search screen for Pilot Reservation only

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<document identifier>	

Employee Search - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help Address

### Employee Search

Last Name  First Name

Employee Name	Employee Number	Group/Branch	Department	Title
Adams, Edward	12345	0101 - Group Name - Branch Name	D/R	BRANCH MANAGER
Adams, Mark	23456	0202 - Group Name - Branch Name	MIS	BUSINESS ANALYST II
Adkins, Cindy	34567	0303 - Group Name - Branch Name	USED CAR	DETAILER
Ahne, Susan	46789	0404 - Group Name - Branch Name	ADMIN	DEPARTMENT MANAGER
Alagappiranar, Seenivazan	87954	0505 - Group Name - Branch Name	NAT RES	BRANCH MANAGER
Albers, Jeri	5641G	0606 - Group Name - Branch Name	D/R	BUSINESS ANALYST II
Allen, Karen	6547E	0707 - Group Name - Branch Name	MIS	DETAILER
Alves, Pam	6542D	0101 - Group Name - Branch Name	USED CAR	DEPARTMENT MANAGER
Anantharam, Parasuram	6546F	0202 - Group Name - Branch Name	ADMIN	BRANCH

Items 1 - 22 of 22 found      [Prev](#) [1](#) [2](#) [3](#) [4](#) [5](#) [Next](#)

Done Local intranet

Figure 5 – Employee Search Screen



<Project Name>	Version: <1.0>
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<document identifier>	

Figure 6 – Add New Contact Screen

### 3. Reservation Number

#### 3.1 Behavior

This area shows the unique reservation number that has been assigned to the newly created reservation. The reservation number is 6 alphanumeric characters long. If another reservation is open, its reservation number will be displayed in this area as well. The user will have the ability to have up to 3 reservations open at a time. A hyperlink will be available on the reservation numbers of the reservations that are NOT currently being displayed. For the reservation that is currently displayed, the reservation number will not have a hyperlink available. This is to allow the user to navigate between the open reservations.

#### 3.2 Validation

None identified at this time.

#### 3.3 Business Exceptions

If the user tries to open a 4<sup>th</sup> reservation, the system will display a message stating, "A maximum of 3 reservations may be displayed".

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### 3.4 System Exceptions

None identified at this time.

## 4. Referral Title Bar Area

### 4.1 Behavior

The open area in the Referral Title Bar will allow the user to access transaction--wide functions. These functions for Reservation are: -- Options --, Print, Void and Transfer. The default option is "--Options --". The user must press the Go button to initiate the selected function.

The Title Bar button area in the Referral Title Bar contains two buttons – a Go button and a Close button.

The Go button is always active, and is used to initiate a function selected in the Option area. If the selected option is "--Options --", nothing should happen .

The Close button is always active and is used to close the current transaction. The button is labeled with an 'X'. Pressing this button will cause a confirmation popup, asking the user if they wish to cancel the transaction and lose all changes. If the user selects 'Yes', the transaction is closed with no changes saved to the database.

### 4.2 Validation

None identified at this time.

### 4.3 Business Exceptions

None identified at this time.

### 4.4 System Exceptions

None identified at this time.

## 5. Account and Employee Number Radial Button

### 5.1 Behavior

These two buttons are mutually exclusive. Only one or the other may be selected. If a radial button is selected, with out any other information input and then the search button is selected, and then the appropriate search panel is presented. For example, if the Account radial button is selected, no information is entered, and the search button is selected, then the Account Search panel is displayed. If the Employee Number radial button is selected, no information is entered, and the search button is selected, then the Employee Search panel is displayed. This should default to the "Account" selection.

### 5.2 Validation

None identified at this time.

### 5.3 Business Exceptions

None identified at this time.

### 5.4 System Exceptions

The system will only allow one or the other to be selected .

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## 6. Account Name/Short List Area

### 6.1 Behavior

This area is a drop down area comprised of the Branch's short list. If a search is executed on the account number and a single, valid match is found, this area will be filled with the corresponding account name.

Information displayed in the short list is:

- Account Name
- Account Number
- Account Type
- Owning Group and Branch Number
- Account Street Address
- Account City
- Account State
- Account Zip Code
- Account Telephone Number(s)

By selecting an Account from this short list all of the appropriate information will be populated into the detail section.

### 6.2 Validation

None identified at this time.

### 6.3 Business Exceptions

None identified at this time.

### 6.4 System Exceptions

None identified at this time.

## 7. Account Number Area

### 7.1 Behavior

This is a free form alphanumeric area. An entry into this area is valid to execute a search.

### 7.2 Validation

None identified at this time.

### 7.3 Business Exceptions

None identified at this time.

### 7.4 System Exceptions

None identified at this time.

## 8. Contact Name Area

### 8.1 Behavior

This area is disabled and unpopulated until a valid Account Name and/or Account Number has been selected, or entered and the detail returned from the database. Once a single and valid Account has been returned then this will be a drop down list populated with the contact(s) associated with that Account.

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## 8.2 Validation

None identified at this time.

## 8.3 Business Exceptions

None identified at this time.

## 8.4 System Exceptions

None identified at this time.

## 9. Phone Number

### Behavior

This is an alphanumeric field that is populated with the contact phone number once a contact is selected by the user. Once the field is populated, the user should have the ability to change this field. If the user changes the field; the changes will only be saved at the transaction level and will not affect the reference data. For reservation pilot, all of the contacts will display the account phone number in the Contact phone number field. This is because currently, we are not storing contact phone numbers or extensions with for a particular account.

## 9.1 Validation

None identified at this time

## 9.2 Business Exceptions

None identified at this time

## 9.3 System exceptions

None identified at this time.

## 10. New Contact Button

### 10.1 Behavior

Selecting this button will display the New Contact panel. The button is not enabled until a valid Account Name or Number is entered or selected and the detail is displayed.

### 10.2 Validation

None identified at this time.

### 10.3 Business Exceptions

If the Account Type, associated with this Account is Fleet, then this button will be disabled.

### 10.4 System Exceptions

None identified at this time.

## 11. Employee Number Area

### 11.1 Behavior

This area is a free form text area that will allow the user to input alphanumeric values. An entry to this area is valid to execute a search.

### 11.2 Validation

None identified at this time.

### 11.3 Business Exceptions

None identified at this time.

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#### 11.4 System Exceptions

None identified at this time.

### 12. Search Button

#### 12.1 Behavior

A search may be executed if either the Account Number area has values entered or the Employee Number area has values entered. The system will search for exact matches and display either the detail if a single match is found or the Account Search panel or Employee search panel if multiple matches are found. If neither area has values entered and the search button is executed then either the Account Search panel or the Employee Search panel will be displayed depending on which radial button is selected.

#### 12.2 Validation

None identified at this time.

#### 12.3 Business Exceptions

If no matches are found the message "0 record of 0 records were found". Or whatever the standard verbiage is displayed.

#### 12.4 System Exceptions

None identified at this time.

### 13. Referral Detail Area

#### 13.1 Behavior

This are will be populated with either Account or Employee Number detail if a single match is found.

For an Account the displayed information is:

- Account Name
- Account Number
- Owning Group and Branch
- Account Type
- Street Address
- City
- State
- Zip
- Phone Number(s)

From Special Instructions

- 2 "Hot" lines
- Miscellaneous Information
- Discounts
- Rules
- Products

For an Employee the displayed information is:

- Employee Name
- Employee Number
- Group and Branch Number
- Group and Branch Description
- Department
- Title

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### 13.2 Validation

None identified at this time.

### 13.3 Business Exceptions

None identified at this time.

### 13.4 System Exceptions

None identified at this time.

## 14. Button Line Area

### 14.1 Behavior

The Previous button will take the user to the Driver screen within the same transaction.

The Next button will take the user to the Dates/Rates within the same transaction.

The Complete button will initiate a save of the transaction. All validations will be performed, returning any errors to the user . If there are no errors, the transaction is saved and the user is returned to the Reservation home page.

### 14.2 Validation

None identified at this time.

### 14.3 Business Exceptions

None identified at this time.

### 14.4 System Exceptions

None identified at this time.

## 15. Search - Group Area

### 15.1 Behavior

This area will be a drop down list of all groups. It will default to the terminal's group. The option of All is also available. For reservation pilot, the user will not be able to change the group value.

### 15.2 Validation

None identified at this time.

### 15.3 Business Exceptions

None identified at this time.

### 15.4 System Exceptions

None identified at this time.

## 16. Search - Account Name Area

### 16.1 Behavior

This area will allow entry of alphanumeric values. The system will search on exact matches for the values entered with an implied wild card at the end.

### 16.2 Validation

None identified at this time.

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### 16.3 **Business Exceptions**

If no matches are found the message "0 record of 0 records were found". Or whatever the standard verbiage is displayed.

### 16.4 **System Exceptions**

None identified at this time.

## 17. **Search – Account Phone Number Area**

### 17.1 **Behavior**

This area will allow entry of alphanumeric values. The system will search on exact matches without any implied wild cards.

### 17.2 **Validation**

None identified at this time.

### 17.3 **Business Exceptions**

If no matches are found the message "0 record of 0 records were found". Or whatever the standard verbiage is displayed.

### 17.4 **System Exceptions**

None identified at this time.

## 18. **Search – Account Type Area**

### 18.1 **Behavior**

This area will be a drop down list of account types. It will default to All.

The domain values are:

- Body Shop
- Corporate
- Government
- Fleet
- Dealership
- Insurance
- Other
- All

### 18.2 **Validation**

None identified at this time.

### 18.3 **Business Exceptions**

The system cannot execute a search on Account Type alone. Either a Group, Account Name and/or Account Phone Number is also required. If only Account Type is selected a message is displayed "Must specify another search criteria".

A search cannot be executed if the Group selection is "All" and the Account Type selection is "All", with Account Name and Account Phone Number without values. Group or Account Type must have a value selected. If both are "All" display error message to user "Group and Account Type cannot both be All".

### 18.4 **System Exceptions**

None identified at this time.

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## 19. Search – Display Area

### 19.1 Behavior

The result display will initially be blank on first presentation of the panel and until at least one search is executed and at least one record is found that matches the search criteria.

This is a results list area. The following information is displayed:

- Account Name
- Account Number
- Account Type
- Owning Group and Branch Number
- Account Street Address
- Account City
- Account State
- Account Zip Code
- Account Phone Number(s) – If the search was on Phone Number, then this will display the match with the search criteria, whether Home Work or Other phone number. In all other circumstances, the work phone number should be displayed.

The users would like to have the ability to sort the columns in both ascending and descending order. This will sort the entire result set. When a column is selected to sort, all other default or secondary sort criteria is abandoned. The manner in which Oracle sorts ascending and descending values will be used. The display area will position to the top of the entire result list based on the column selected to sort.

If the user selects an Account Name, the referral source panel will be presented with the appropriate information.

### 19.2 Validation

None identified at this time.

### 19.3 Business Exceptions

None identified at this time.

### 19.4 System Exceptions

None identified at this time.

## 20. Employee Search – Last Name Area

### 20.1 Behavior

This area will allow entry of alphanumeric values. The system will search on exact matches for values entered with an implied wild card at the end. Values in the Last Name area alone is valid to execute a search.

### 20.2 Validation

If no matches are found the message “0 record of 0 records were found”. Or whatever the standard verbiage is displayed.

### 20.3 Business Exceptions

|

None identified at this time.



<Project Name>	Version: <1.0>
Supplementary Specification	Date: <dd/mmm/yy>
<document identifier>	

## 20.4 System Exceptions

None identified at this time.

## 21. Employee Search – First Name Area

### 21.1 Behavior

This area will allow entry of alphanumeric values. The system will search on exact matches for the values entered with an implied wild card at the end. This area will be disabled until a value has been entered into the Last Name Area.

### 21.2 Validation

None identified at this time.

### 21.3 Business Exceptions

If only the first name area has data, and a search command is executed, then a message will be presented to the user stating, "Must Specify a Last Name".

### 21.4 System Exceptions

None identified at this time.

## 22. Employee Search – Display Area

### 22.1 Behavior

The result display will initially be blank on first presentation of the panel and until at least one search is executed and at least one record is found that matches the search criteria.

This is a results list area. The following information is displayed:

- Employee Name
- Employee Number
- Group and Branch Number
- Group and Branch Description
- Department
- Title

Since the Employee data is coming from a tuxedo call, the user will not be allowed the ability to sort on a column in the search results.

If the user selects an Employee Name, the referral source panel will be presented with the appropriate information.

### 22.2 Validation

None identified at this time.

### 22.3 Business Exceptions

None identified at this time.

### 22.4 System Exceptions

None identified at this time.

<Project Name>	Version: <1.0>
Supplementary Specification	Date: <dd/mm/yy>
<document identifier>	

## **23. Search, Reset and Cancel Button Line Area**

### **23.1 Behavior**

The Search image/button will invoke the search process, submitting the form to the server.

The Reset image/button will clear out the all of the search criteria data areas and reset the panel to the initial values.

The Cancel image/button will take the user to the last panel accessed.

### **23.2 Validation**

None identified at this time.

### **23.3 Business Exceptions**

None identified at this time.

### **23.4 System Exceptions**

None identified at this time.

## **24. Print Current Page and Print All Records Button Line Area**

### **24.1 Behavior**

The Print Current Page image/button will print the information currently displayed on the panel.  
The Print All Records image/button will print the information in the entire result set list.

### **24.2 Validation**

None identified at this time.

### **24.3 Business Exceptions**

None identified at this time.

### **24.4 System Exceptions**

None identified at this time.

## **25. Add New Contact – Last Name Area**

### **25.1 Behavior**

This area will allow entry of alphanumeric values.

### **25.2 Validation**

None identified at this time.

### **25.3 Business Exceptions**

None identified at this time

### **25.4 System Exceptions**

None identified at this time.

## **26. Add New Contact – First Name Area**

### **26.1 Behavior**

This area will allow entry of alphanumeric values.

<Project Name>	Version: <1.0>
Supplementary Specification	Date: <dd/mmm/yy>
<document identifier>	

## 26.2 Validation

None identified at this time.

## 26.3 Business Exceptions

None identified at this time

## 26.4 System Exceptions

None identified at this time.

## 27. Ok and Cancel Button Area

### 27.1 Behavior

The "Ok" image/button will attempt to add the information entered to the database, invoking the appropriated edit criteria.

The Cancel image/button will take the user to the last panel accessed .

### 27.2 Validation

If the user hits the "Ok" button and there is no data in either the Last Name and/or First Name fields, the system will display an error message that says "Must enter a First Name and/or Last Name."

### 27.3 Business Exceptions

None identified at this time.

### 27.4 System Exceptions

None identified at this time.

## 28. Security

The user must have the appropriate security level to access these screens. The user is allowed to view or print anything. It is when they attempt to edit a reservation that their security restrictions will be enforced.

---

# Enterprise Rent-A-Car

---

## **Rental Redesign/ECARS 2.0** **Screen Action Specification: Vehicle / Shop**

**Version 2.7**

<b>Rental Redesign</b>	Version: 2.7
Supplementary Specification	Date: 12/21/2001
Vehicle / Shop	

## Revision History

Date	Version	Description	Author
08/03/2001	1.0	Created document	Chris Carr
08/07/2001	1.1	Updated document with revised screen shots and verbiage	Chris Carr
08/10/2001	1.2	Updated document to reflect Use Case changes	Chris Carr
08/13/2001	1.3	Clarification of Contact Last Name and/or Contact First Name. Added info relating to System generated Notes.	Chris Carr
08/14/2001	1.4	Added info for European Branch Short list	Chris Carr
08/16/2001	1.5	<ul style="list-style-type: none"> <li>Changed text in 4.5.1 to "... Account's phone number."</li> <li>Changed text in 4.5.2 to "Entered data should be 10 digits for US to include area code or appropriate format for other countries."</li> <li>Phone number is pre-populated with value from selected Account.</li> <li>Changing Account name will update the Account number and vice versa.</li> <li>When "Theft" is selected, Theft Waiver Days (3.14) is no longer a required field.</li> <li>If a value other than (Blank) is selected for Theft Waiver Days (3.14), the Date of Loss (3.12) field is then required.</li> </ul>	Chris Carr
08/20/2001	1.6	Renamed document to Vehicle/Shop.	Chris Carr
08/24/2001	1.7	Added Country code to Not on File.	Chris Carr
08/31/2001	1.8	Updated with changes from Navigation use case	James Atteberry
09/07/2001	2.0	<ul style="list-style-type: none"> <li>Added screen shots for the United Kingdom, Ireland and Germany versions.</li> <li>Added screen shot for Germany's Schwakeliste.</li> <li>Made changes to the order of text descriptions of the fields to reflect the new order presented in the screen shots of the Vehicle/Shop screen.</li> <li>License Plate Number will no longer be displayed for North America.</li> <li>License Plate Number will be displayed as Registration Number for all of the European countries.</li> <li>Removed the requirement of Date of Loss if a Theft Waiver Days value is</li> </ul>	Chris Carr

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		<p>selected.</p> <ul style="list-style-type: none"> <li>Removed the "and/or" requirement for Contact Last Name and Contact First Name. Only the Last Name is now required.</li> <li>Added a new section for the text description of the Schwakeliste fields.</li> <li>Year will not be displayed for Ireland.</li> <li>Schwakeliste pop-up is no longer required.</li> <li>System note needs to be generated for registration number and class.</li> <li>Put in changes for Class now being a drop down selection field.</li> </ul>	
09/12/2001	2.2	Updated with new screen shots containing new navigation areas.	Chris Carr
09/21/2001	2.3	<ul style="list-style-type: none"> <li>Expanded sys-gen note for Vehicle Year/Make/Model changed to 3 separate notes.</li> <li>Reinstated the "and/or" requirement for Contact Last Name and First Name.</li> </ul>	Chris Carr
10/12/2001	2.4	Updated with new screen shots that are now current with what is developed.	Chris Carr *
10/30/2001	2.5	<ul style="list-style-type: none"> <li>Updated with new screen shots and verbiage that reflect the change of the "Add Contact" button to now say "New Contact".</li> <li>Changed system notes for "Not on File" to reflect what was developed.</li> </ul>	Chris Carr
10/30/2001	2.6	Added verbiage stating that blanking out the Account name/number will then cause the Account number/name and Contact to also be blanked out.	Chris Carr
11/13/2001	2.7	<ul style="list-style-type: none"> <li>Changed theft waiver days from "One Day", "Two Days", "Three Days" to "1 Day", "2 Days" and "3 Days".</li> <li>Added system generated notes for Other Make and Other Model.</li> </ul>	Chris Carr

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## Screen Action Specification

### 1. Introduction - Renter's Vehicle/Shop Screen Spec

This document will describe the behavioral characteristics associated with the Renter's Vehicle / Shop screen.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

Rental Redesign	Version: 2.7
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## 2. Screen Prints

Vehicle / Shop - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Address Y:\APPS\Ecars\_20\Development Projects\HTML\Open Ticket\Shop\RentersVehicle&Shop.html

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Renter's Vehicle** - Options - Go X

Vehicle

Year

Make  Other Make

Model  Other Model

Color  Other Color

Loss Information

Is Car  Type of Loss

Drivable?

Total Loss?  Date of Loss

Theft Waiver Days

Vehicle Notes

**Shop**

Shop

Account Name  Account Number

Contact Name  Phone Number

Account Search  Not on File

New Contact

Previous  Next  Complete

Res - 411781 Tkt - 234567 Cbk - 363221

Done Local Intranet

Figure 1 – Vehicle / Shop (North America)

<b>Rental Redesign</b>	Version: 2.7
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Vehicle / Shop	

Vehicle / Shop - Ireland and United Kingdom - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Address Y:\APPS\Ecars\_20\Development Projects\HTML\Open Ticket\Shop\Vehicle85Shop-IrelandUK.html

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Renter's Vehicle** - Options - Go

Vehicle

Registration Number

Make Other Make

Model Other Model

Color Other Color

Loss Information

Is Car Drivable? Type of Loss

Total Loss? Date of Loss

Vehicle Notes

**Shop**

Shop

Account Name Account Number

Contact Name New Contact

Account Search Not on File

Phone Number

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

Done Local intranet

Figure 2 – Vehicle / Shop (Ireland & United Kingdom)

Rental Redesign	Version: 2.7
Supplementary Specification	Date: 12/21/2001
Vehicle / Shop	

Vehicle / Shop - Germany - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Address Y:\APPS\Ecars\_20\Development Projects\HTML\Open Ticket\Shop\Vehicle&Shop-Germany.html

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Renter's Vehicle**

Vehicle

Registration Number

Year Class

Make Other Make

Model Other Model

Color Other Color

Loss Information

Is Car Drivable? Type of Loss

Total Loss? Date of Loss

Vehicle Notes

**Shop**

Shop

Account Name Account Number

Contact Name Phone Number

Account Search Not on File

New Contact

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

Done Local intranet

Figure 3 – Vehicle / Shop (Germany)

Rental Redesign	Version: 2.7
Supplementary Specification	Date: 12/21/2001
Vehicle / Shop	

Vehicle / Shop - Germany - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Address Y:\APPS\Ecars\_20\Development Projects\HTML\Open Ticket\Shop\Vehicle&Shop-Germany.html

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Renter's Vehicle** - Options - Go

Vehicle

Registration Number

Year

Make

Model

Color

**Shop**

Shop

Account Name

Contact Name

**Not on File**

Name\*

Address\*

Zip\*

Country\*

City\*

State\*

Phone Number\*

Contact Last Name

Contact First Name

OK Cancel

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

keycode=18 Local intranet

Figure 4 - Add Account Not On File



Rental Redesign	Version: 2.7
Supplementary Specification	Date: 12/21/2001
Vehicle / Shop	

Vehicle / Shop - Germany - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Address: Y:\APPS\Ecars\_20\Development Projects\HTML\Open Ticket\Shop\Vehicle&Shop-Germany.html

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Renter's Vehicle** -- Options -- Go

Vehicle

Registration Number

Year Class

Make Other Make

Model Other Model

Color

Loss Information

Is Car Type  
Drivable? of Loss

Total Loss? Date of Loss

**New Contact**

Last Name:

First Name:

Account Name

Contact Name

OK Cancel

New Contact

Not on File

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

keycode=9 Local Intranet

Figure 5- New Contact

<b>Rental Redesign</b>	Version: 2.7
Supplementary Specification	Date: 12/21/2001
Vehicle / Shop	

## Vehicle / Shop (Figure 1, Figure 2, Figure 3)

### 2.1 Reservation Number

#### 2.1.1 Behavior

This area shows the unique reservation number that has been assigned to the newly created reservation. The reservation number is 6 alphanumeric characters long. If another reservation is open, its reservation number will be displayed in this area as well. The user will have the ability to have up to 3 reservations open at a time. A hyperlink will be available on the reservation numbers of the reservations that are NOT currently being displayed. For the reservation that is currently displayed, the reservation number will not have a hyperlink available. This is to allow the user to navigate between the open reservations.

#### 2.1.2 Validation

None identified at this time.

#### 2.1.3 Business Exceptions

If the user tries to open a 4<sup>th</sup> reservation, the system will display a message stating, "A maximum of 3 reservations may be displayed."

#### 2.1.4 System Exceptions

None identified at this time.

### 2.2 Vehicle/Shop Title Bar Area

#### 2.2.1 Behavior

The option area in the Vehicle/Shop Title Bar will allow the user to access transaction-wide functions. These functions for Reservation are: --Options --, Print, Void and Transfer. The default option is "--Options --". The user must press the Go button to initiate the selected function.

The Title Bar button area in the Vehicle/Shop title bar contains two buttons – a Go button and a Close button.

The Go button is always active, and is used to initiate a function selected in the Options area. If the selected option is "--Options --", nothing should happen.

The Close button is always active, and is used to close the current transaction. The button is labeled with an 'X'. Pressing this button will cause a confirmation popup, asking the user if they wish to close the transaction and lose all changes. If the user selected 'No', they are returned to the Vehicle/Shop screen. If the user selects 'Yes', the transaction is closed with no changes saved to the database.

#### 2.2.2 Validation

None identified at this time.

#### 2.2.3 Business Exceptions

None identified at this time.

#### 2.2.4 System Exceptions

None identified at this time.

### 2.3 Button Line Area

#### 2.3.1 Behavior

The Previous button will take the user to the Bill-to screen within the same transaction.

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The Next button will take the user to the Notes screen within the same transaction.

The Complete button will initiate a save of the transaction. All validations will be performed, returning any errors to the user. If there are no errors, the transaction is saved, and the user returned to the Reservation home page.

#### 2.3.2 Validation

None identified at this time.

#### 2.3.3 Business Exceptions

None identified at this time.

#### 2.3.4 System Exceptions

None identified at this time.

### 2.4 Registration Number (Vehicle area of Renter's Vehicle sub-screen)

#### 2.4.1 Behavior

This is a text field in which the user may enter a Registration Number. This field only appears on the European versions of the application and is hidden on the North American version.

#### 2.4.2 Validation

No validation is necessary.

#### 2.4.3 Business Exceptions

None have been identified at this time.

#### 2.4.4 System Exceptions

None have been identified at this time.

### 2.5 Year (Vehicle area of Renter's Vehicle sub-screen)

#### 2.5.1 Behavior

This is a drop-down field containing the Years available for searching. This field is hidden on the Ireland and United Kingdom version of the application and is visible on the North American and German versions.

#### 2.5.2 Validation

No validation is necessary.

#### 2.5.3 Business Exceptions

None have been identified at this time.

#### 2.5.4 System Exceptions

None have been identified at this time.

### 2.6 Class (Vehicle area of Renter's Vehicle sub-screen)

#### 2.6.1 Behavior

This is a drop-down field containing a list of numbers from 1 to 10 for the User to select as the Class. This field only appears on the German version of the application and is hidden on the North American and the Ireland and United Kingdom versions.

#### 2.6.2 Validation

No validation is necessary.

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### 2.6.3 *Business Exceptions*

None have been identified at this time.

### 2.6.4 *System Exceptions*

None have been identified at this time.

## 2.7 **Make (Vehicle area of Renter's Vehicle sub-screen)**

### 2.7.1 Behavior

This is a drop-down field containing a list of Makes for the Year selected. If a Make different from "Other Make" is selected from the list, the Other Make field should be cleared out. This field appears on all versions of the application.

### 2.7.2 *Validation*

No validation is necessary.

### 2.7.3 *Business Exceptions*

None have been identified at this time.

### 2.7.4 *System Exceptions*

None have been identified at this time.

## 2.8 **Other Make (Vehicle area of Renter's Vehicle sub-screen)**

### 2.8.1 Behavior

This is a text field in which the user may enter a Make that was not available in the drop-down. If a value is entered, the Make drop-down field should be cleared out if it has a value different from "Other Make". This field appears on all versions of the application.

### 2.8.2 *Validation*

No validation is necessary.

### 2.8.3 *Business Exceptions*

None have been identified at this time.

### 2.8.4 *System Exceptions*

None have been identified at this time.

## 2.9 **Model (Vehicle area of Renter's Vehicle sub-screen)**

### 2.9.1 Behavior

This is a drop-down field containing a list of Models for the Make selected. If a Model different from "Other Model" is selected from the list, the Other Model field should be cleared out. This field appears on all versions of the application.

### 2.9.2 *Validation*

No validation is necessary.

### 2.9.3 *Business Exceptions*

None have been identified at this time.

### 2.9.4 *System Exceptions*

None have been identified at this time.

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## **2.10 Other Model (Vehicle area of Renter's Vehicle sub-screen)**

### **2.10.1 Behavior**

This is a text field in which the user may enter a Model that was not available in the drop-down. If a value is entered, the Model drop-down field should be cleared out if it has a value different from "Other Model".  
This field appears on all versions of the application.

### **2.10.2 Validation**

No validation is necessary.

### **2.10.3 Business Exceptions**

None have been identified at this time.

### **2.10.4 System Exceptions**

None have been identified at this time.

## **2.11 Color (Vehicle area of Renter's Vehicle sub-screen)**

### **2.11.1 Behavior**

This is a drop-down field containing a list of available colors. If a Color different from "Other Color" is selected from the list, the Other Color field should be cleared out. This field appears on all versions of the application.

### **2.11.2 Validation**

No validation is necessary.

### **2.11.3 Business Exceptions**

None have been identified at this time.

### **2.11.4 System Exceptions**

None have been identified at this time.

## **2.12 Other Color (Vehicle area of Renter's Vehicle sub-screen)**

### **2.12.1 Behavior**

This is a text field in which the user may enter a Color that was not available in the drop-down. If a value is entered, the Color drop-down field should be cleared out if it has a value different from "Other Color". This field appears on all versions of the application.

### **2.12.2 Validation**

No validation is necessary.

### **2.12.3 Business Exceptions**

None have been identified at this time.

### **2.12.4 System Exceptions**

None have been identified at this time.

## **2.13 Is Car Drivable? (Loss Information area of Renter's Vehicle sub-screen)**

### **2.13.1 Behavior**

This is a drop down field containing the following domain values:

- (Blank) - Default
- Yes
- No

This field appears on all versions of the application.

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### 2.13.2 Validation

No validation is necessary.

### 2.13.3 Business Exceptions

None have been identified at this time.

### 2.13.4 System Exceptions

None have been identified at this time.

## 2.14 Type of Loss? (Loss Information area of Renter's Vehicle sub-screen)

### 2.14.1 Behavior

This is a drop down field containing the following domain values:

- (Blank) - Default
- Damage
- Theft

This field appears on all versions of the application.

### 2.14.2 Validation

No validation is necessary.

### 2.14.3 Business Exceptions

None have been identified at this time.

### 2.14.4 System Exceptions

None have been identified at this time.

## 2.15 Total Loss? (Loss Information area of Renter's Vehicle sub-screen)

### 2.15.1 Behavior

This is a drop down field containing the following domain values:

- (Blank) - Default
- Yes
- No

This field appears on all versions of the application.

### 2.15.2 Validation

No validation is necessary.

### 2.15.3 Business Exceptions

None have been identified at this time.

### 2.15.4 System Exceptions

None have been identified at this time.

## 2.16 Date of Loss (Loss Information area of Renter's Vehicle sub-screen)

### 2.16.1 Behavior

This is a text field in which the user may enter a date value. This field appears on all versions of the application.

### 2.16.2 Validation

Entered data should be in a MM/DD/YYYY format.

### 2.16.3 Business Exceptions

None have been identified at this time.

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#### 2.16.4 System Exceptions

None have been identified at this time.

### 2.17 Calendar button (Loss Information area of Renter's Vehicle sub-screen)

#### 2.17.1 Behavior

This will bring up a calendar pop-up window allowing the user to select a specific date. The selected date will fill the Date of Loss field. This button appears on all versions of the application.

#### 2.17.2 Validation

No validation is necessary.

#### 2.17.3 Business Exceptions

None have been identified at this time.

#### 2.17.4 System Exceptions

None have been identified at this time.

### 2.18 Theft Waiver Days (Loss Information area of Renter's Vehicle sub-screen)

#### 2.18.1 Behavior

This is a drop down field containing the following domain values:

- (Blank) - Default
- 1 Day
- 2 Days
- 3 Days

This field only appears on the North American version of the application and is hidden on the European versions.

#### 2.18.2 Validation

No validation is necessary.

#### 2.18.3 Business Exceptions

None have been identified at this time.

#### 2.18.4 System Exceptions

None have been identified at this time.

### 2.19 Vehicle Notes (Renter's Vehicle sub-screen)

#### 2.19.1 Behavior

This is a free form text field in which the user may enter data. The information entered here is only visible from this screen. This field appears on all versions of the application.

#### 2.19.2 Validation

No validation is necessary.

#### 2.19.3 Business Exceptions

None have been identified at this time.

#### 2.19.4 System Exceptions

None have been identified at this time.

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## **2.20 Account Name (Shop sub-screen)**

### **2.20.1 Behavior**

This field's value is entered when:

- User enters the Account name.
- User clicks the "down arrow" button to the immediate right and selects an Account from the Branch Short list.
- User enters a valid number in the Account Number field. That number's Account name value will then populate this field.
- User clicks the "Search" button and selects an Account from the Account Information list.
- User clicks the "Not on File" button and enters the appropriate new Account information.

If an Account name is entered, the Account Number, Contact Name and Phone Number fields will then be populated. If the Account name is blanked out and the user tabs off or leaves the field, Account Number and Contact will also be blanked out. This field appears on all versions of the application.

### **2.20.2 Validation**

No validation is necessary.

### **2.20.3 Business Exceptions**

None have been identified at this time.

### **2.20.4 System Exceptions**

None have been identified at this time.

## **2.21 Down arrow button (Shop sub-screen)**

### **2.21.1 Behavior**

This will bring up the Branch Short list allowing the user to select a specific Account. If in Europe, the European Branch Short list will be brought up. If an Account is selected, the Account Name, Account Number, Contact Name and Phone Number fields will then be populated. This button appears on all versions of the application.

### **2.21.2 Validation**

No validation is necessary.

### **2.21.3 Business Exceptions**

None have been identified at this time.

### **2.21.4 System Exceptions**

None have been identified at this time.

## **2.22 Account Number (Shop sub-screen)**

### **2.22.1 Behavior**

This field's value is entered when:

- User enters a valid name in the Account Name field. That name's Account number value will then populate this field.
- User clicks the "down arrow" button to the immediate left and selects an Account from the Branch Short list.
- User enters the Account number.
- User clicks the "Search" button and selects an Account from the Account Information list.
- User clicks the "Not on File" button and enters the appropriate new Account information.

If an Account number is entered, the Account Name, Contact Name and Phone Number fields will then be populated. If the Account number is blanked out and the user tabs off or leaves the field, Account Name



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and Contact will also be blanked out. This field appears on all versions of the application.

#### 2.22.2 *Validation*

No validation is necessary.

#### 2.22.3 *Business Exceptions*

None have been identified at this time.

#### 2.22.4 *System Exceptions*

None have been identified at this time.

### 2.23 **Search button (Shop sub-screen)**

#### 2.23.1 *Behavior*

This will bring up the Account Search screen allowing the user to search for and then select a specific Account. If an Account is selected, the Account Name, Account Number, Contact Name and Phone Number fields will then be populated. This button appears on all versions of the application.

#### 2.23.2 *Validation*

No validation is necessary.

#### 2.23.3 *Business Exceptions*

None have been identified at this time.

#### 2.23.4 *System Exceptions*

None have been identified at this time.

### 2.24 **Not on File button (Shop sub-screen)**

#### 2.24.1 *Behavior*

This will bring up the Add Account Not on File screen allowing the user to enter information for a new Account. After all the necessary fields on that screen are entered, the Account Name, Account Number, Contact Name and Phone Number fields will then be populated with that screen's entered information. This button appears on all versions of the application.

#### 2.24.2 *Validation*

No validation is necessary.

#### 2.24.3 *Business Exceptions*

None have been identified at this time.

#### 2.24.4 *System Exceptions*

None have been identified at this time.

### 2.25 **Contact Name (Shop sub-screen)**

#### 2.25.1 *Behavior*

This field's value is entered when:

- User enters a valid name in the Account Name field. That name's Contact name value will then populate this field.
- User clicks the "down arrow" button to the immediate right of Account Name and selects an Account from the Branch Short list. That Account's Contact name value will then populate this field's value.
- User enters a valid number in the Account Number field. That number's Contact name value will then populate this field.
- User clicks the "Search" button and selects an Account from the Account Information list. That

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Account's Contact name value will then populate this field's value.

- User clicks the "Not on File" button and enters the appropriate new Contact information after the new Account information. After all the necessary fields on that screen are entered, that screen's entered information for Contact name will then populate this field's value.
- User enters the Contact name.
- User clicks the "down arrow" button to the immediate right and selects a Contact from the Contact list.
- User clicks the "Add New" button and enters the appropriate new Contact information.

This field appears on all versions of the application.

#### 2.25.2 Validation

No validation is necessary.

#### 2.25.3 Business Exceptions

None have been identified at this time.

#### 2.25.4 System Exceptions

None have been identified at this time.

### 2.26 Down arrow button (Shop sub-screen)

#### 2.26.1 Behavior

This will bring up the Contact list allowing the user to select a specific Contact. If a Contact is selected, the Contact Name field will then be populated. This button appears on all versions of the application.

#### 2.26.2 Validation

No validation is necessary.

#### 2.26.3 Business Exceptions

None have been identified at this time.

#### 2.26.4 System Exceptions

None have been identified at this time.

### 2.27 New Contact button (Shop sub-screen)

#### 2.27.1 Behavior

This will bring up the New Contact screen allowing the user to enter information for a new Contact. After the necessary field on that screen is entered, the Contact Name field will then be populated with that screen's entered information. This button appears on all versions of the application.

#### 2.27.2 Validation

No validation is necessary.

#### 2.27.3 Business Exceptions

None have been identified at this time.

#### 2.27.4 System Exceptions

None have been identified at this time.

### 2.28 Phone Number (Shop sub-screen)

#### 2.28.1 Behavior

This field's value is entered when:

- User enters a valid name in the Account Name field. That name's Phone number value will then populate this field.

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- User clicks the "down arrow" button to the immediate right of Account Name and selects an Account from the Branch Short list. That Account's Phone number value will then populate this field's value.
- User enters a valid number in the Account Number field. That number's Phone number value will then populate this field.
- User clicks the "Search" button and selects an Account from the Account Information list. That Account's Phone number value will then populate this field's value.
- User clicks the "Not on File" button and enters the appropriate new Account information. That Account's Phone number value will then populate this field's value.
- User enters the Phone number.

This button appears on all versions of the application.

## 2.28.2 Validation

No validation is necessary.

## 2.28.3 Business Exceptions

None have been identified at this time.

## 2.28.4 System Exceptions

None have been identified at this time.

# 3. Not on File (Figure 4)

## 3.1 Name

### 3.1.1 Behavior

This is a text field in which the user may enter an Account name.

### 3.1.2 Validation

No validation is necessary.

### 3.1.3 Business Exceptions

None have been identified at this time.

### 3.1.4 System Exceptions

None have been identified at this time.

## 3.2 Address

### 3.2.1 Behavior

This is a free form text field in which the user may enter an Account's address.

### 3.2.2 Validation

No validation is necessary.

### 3.2.3 Business Exceptions

None have been identified at this time.

### 3.2.4 System Exceptions

None have been identified at this time.

## 3.3 Zip

### 3.3.1 Behavior

This is a text field in which the user may enter an Account's zip code.

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### 3.3.2 *Validation*

No validation is necessary.

### 3.3.3 *Business Exceptions*

None have been identified at this time.

### 3.3.4 *System Exceptions*

None have been identified at this time.

## 3.4 **Geographic Framework button (lightening bolt graphic)**

### 3.4.1 *Behavior*

This will fill in the City and State fields if there is only 1 city for the zip code. If more than 1 city is in the entered zip code, the Multiple Cities Found page will be brought up, allowing the user to select a city. The City and State fields will then be filled with the user's selection.

### 3.4.2 *Validation*

No validation is necessary.

### 3.4.3 *Business Exceptions*

None have been identified at this time.

### 3.4.4 *System Exceptions*

None have been identified at this time.

## 3.5 **Country**

### 3.5.1 *Behavior*

This is a drop down field containing the list of countries.

### 3.5.2 *Validation*

No validation is necessary.

### 3.5.3 *Business Exceptions*

None have been identified at this time.

### 3.5.4 *System Exceptions*

None have been identified at this time.

## 3.6 **City**

### 3.6.1 *Behavior*

This is a text field in which the user may enter an Account's city. This field may also be filled by actions performed by the Geographic Framework button.

### 3.6.2 *Validation*

No validation is necessary.

### 3.6.3 *Business Exceptions*

None have been identified at this time.

### 3.6.4 *System Exceptions*

None have been identified at this time.

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### 3.7 State

#### 3.7.1 Behavior

This is a drop down field containing the list of states. This field may also be filled by actions performed by the Geographic Framework button.

#### 3.7.2 Validation

No validation is necessary.

#### 3.7.3 Business Exceptions

None have been identified at this time.

#### 3.7.4 System Exceptions

None have been identified at this time.

### 3.8 Phone

#### 3.8.1 Behavior

This is a text field in which the user may enter an Account's phone number.

#### 3.8.2 Validation

Entered data should be 10 digits for the US to include area code or the appropriate format for other countries.

#### 3.8.3 Business Exceptions

None have been identified at this time.

#### 3.8.4 System Exceptions

None have been identified at this time.

### 3.9 Contact Last Name

#### 3.9.1 Behavior

This is a text field in which the user may enter a Contact's last name for the new Account.

#### 3.9.2 Validation

No validation is necessary.

#### 3.9.3 Business Exceptions

None have been identified at this time.

#### 3.9.4 System Exceptions

None have been identified at this time.

### 3.10 Contact First Name

#### 3.10.1 Behavior

This is a text field in which the user may enter a Contact's first name for the new Account.

#### 3.10.2 Validation

No validation is necessary.

#### 3.10.3 Business Exceptions

None have been identified at this time.

#### 3.10.4 System Exceptions

None have been identified at this time.

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### **3.11 Button Line Area – Add Account Not on File**

#### **3.11.1 OK button**

##### **3.11.1.1 Behavior**

If data is not present in the required fields the feedback message explains that a value needs to be entered in the field(s) that is/are blank. Two options are presented, OK and Cancel. OK takes the user back to the Add Account Not on File screen for data entry, Cancel dismisses the Add Account Not on File screen. OK will be the default selection.

##### **3.11.1.2 Validation**

There must be data present in all fields except for Contact Last Name and First Name where only one needs to have data present.

##### **3.11.1.3 Business Exceptions**

None have been identified at this time.

##### **3.11.1.4 System Exceptions**

None have been identified at this time.

#### **3.11.2 Cancel button**

##### **3.11.2.1 Behavior**

This button will dismiss the Add Account Not on File screen without saving any data.

##### **3.11.2.2 Validation**

##### **3.11.2.3 Business Exceptions**

None have been identified at this time.

##### **3.11.2.4 System Exceptions**

None have been identified at this time.

### **4. New Contact (Figure 5)**

#### **4.1 Last Name**

##### **4.1.1 Behavior**

This is a text field in which the user may enter a Contact's last name for an already selected Account.

##### **4.1.2 Validation**

No validation is necessary.

##### **4.1.3 Business Exceptions**

None have been identified at this time.

##### **4.1.4 System Exceptions**

None have been identified at this time.

#### **4.2 First Name**

##### **4.2.1 Behavior**

This is a text field in which the user may enter a Contact's first name for an already selected Account.

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#### 4.2.2 Validation

No validation is necessary.

#### 4.2.3 Business Exceptions

None have been identified at this time.

#### 4.2.4 System Exceptions

None have been identified at this time.

### 4.3 Button Line Area – New Contact

#### 4.3.1 OK button

##### 4.3.1.1 Behavior

If data is not present in the Last Name and/or the First Name field(s), the feedback message explains that a value needs to be entered for Last Name and/or First Name. Two options are presented, OK and Cancel. OK takes the user back to the New Contact screen for data entry, Cancel dismisses the New Contact screen. OK will be the default selection.

##### 4.3.1.2 Validation

There must be data present in Last Name and/or First Name field(s).

##### 4.3.1.3 Business Exceptions

None have been identified at this time.

##### 4.3.1.4 System Exceptions

None have been identified at this time.

#### 4.3.2 Cancel button

##### 4.3.2.1 Behavior

This button will dismiss the New Contact screen without saving any data.

##### 4.3.2.2 Validation

If data has been entered the following feedback message is displayed; “Are you sure you want to exit and lose the entered information?”. Two options are presented, Yes and No. Yes will dismiss the screen and not save the data, No will take the user back to the New Contact screen. The default button selection is “No”.

##### 4.3.2.3 Business Exceptions

None have been identified at this time.

##### 4.3.2.4 System Exceptions

None have been identified at this time.

### 5. Rules

5.1 Year, Make and Model domain values come from the database.

5.2 A Contact must be selected for every Account that is selected as a Shop. NOTE: This is not a requirement for Reservation.

5.3 The system should not search for or display any deactivated Accounts.

5.4 User needs to have ability to cancel a search at any time during the search.

5.5 Notes should be generated when any of the following events occur:

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## 6. Security

The user must have the appropriate security level to access this screen.

User adds a "Not on File" Shop	Shop [Blank] was changed to "XXXX"	Create/ Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
User adds a "Not on File" Shop Contact	Not on File Contact "First Name Last Name" was added for Account "XXXXX"	Create/ Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
User changes the Shop Account	Shop "XXXX" was changed to "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
User changes the Type of Loss	Type of Loss "XXXX" was changed to "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
User changes the "Total Loss?"	Total Loss "XXXX" was changed to "XXXX".	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
User changes the Date of Loss	Date of Loss "XXXXXX" was changed to "XXXXXX"	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
User changes number of Theft Waiver Days	Theft Waiver Days "X" was changed to "X"	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop (North America)
User changes the Registration Number	Registration Number "XXXX" was changed to "XXXX"	Edit	Edit	Vehicle/Shop (Ireland, UK, Germany)
User changes the Class	Class "XX" was changed to "XX"	Edit	Edit	Vehicle/Shop (Germany)
User changes the Renter's Vehicle's Year	The Renter's Vehicle Year "XXXX" was changed to Year "XXXX"	Edit	Edit	Vehicle/Shop
User changes the Renter's Vehicle's Make	The Renter's Vehicle Make "XXXX" was changed to Make "XXXX"	Edit	Edit	Vehicle/Shop
User changes the Renter's Vehicle's Model	The Renter's Vehicle Model "XXXX" was changed to Model "XXXX"	Edit	Edit	Vehicle/Shop
User changes the Renter's Vehicle's Other Make	The Renter's Vehicle Other Make "XXXX" was changed to "XXXX"	Edit	Edit	Vehicle/Shop
User changes the Renter's Vehicle's Other Model	The Renter's Vehicle Other Model "XXXX" was changed to "XXXX"	Edit	Edit	Vehicle/Shop



Reservation	Version: 1.5
Supplementary Specification	Date: 12/21/01
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# **ECARS 2.0** **Supplemental Specification: Print Reservation**

**Version 1.5**

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## Revision History

Date	Version	Description	Author
9/7/01	1.0	First Draft	Mike Pallia
09/14/2001	1.1	Added all needed screen shots	James Atteberry
09/21/2001	1.2	Updated screen shots, added requirements for Res Summary	James Atteberry
10/18/2001	1.3	Cleaned document up: fixing page breaks and moving a few items around. Identified requirements.  Also changed screen shot for "Reservation Details" because of CR#1802.	Dave Beebe
10/25/2001	1.4	Added step that shows what the system displays and how the user selects to print.	David Beebe
11/02/2001	1.5	Added new "Reservation Retro" prototype per Jon Jouris's 10/04/2001 user meeting.	Chris Carr

#

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## Supplemental Specification

### 1. Reservation Print

This document details out the print requirements for the Reservation sub-application.

#### 1.1 Print Dialog Box

When the user selects any of the print options, the system will display the IE print dialog box . The user must select OK to initiate printing. There will be no Hot Keys, and the system will automatically fire the OK button if the user hits the enter key .

**Print**

Printer: **Name:** WASDCORP250\B3F5ESD7 **Properties**

**Status:** Ready  
**Type:** Lexmark Optra S 1650  
**Where:** 32.72.13.234:RAW  
**Comment:** ☐ Print to file

**Print range:**  
☒ All  
☐ Pages from 1 to 1  
☐ Selection

**Copies:**  
**Number of copies:** 1    
☐ Collate

**Print frames:**  
☐ As laid out on screen  
☐ Only the selected frame  
☒ All frames individually

☐ Print all linked documents ☐ Print table of links

**OK** **Cancel**

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## 1.2 Reservation Search Screen

1.2.1 The system displays the option for the user to:

- Print Current Page
- Print All Records

1.2.2 Print Current Page

This function prints the records that are currently being displayed on the screen.

(NOTE: If the result set is broken down into groups of 20, this function will print the current set of 20 records regardless if they are all displayed on the screen.)

1.2.3 Print All Records

This function prints all the records that were returned from a search.

1.2.4 Print Output

The records when printed should look like this for both options: Print Current Page and Print All Records.  
If the amount of records exceeds one page, the column headers should appear at the top of every page.

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Reservation Search Page - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

## Reservation Search Results

GP/BR	Pickup Date	Pickup Time	Renter Name	Pickup Method	Car Class	Reservation Type	Reservation Number
1022	02/28/2001	8:30 AM	Smith, Roger	P/UP	MVAR	Retail	103453
1022	03/01/2001	8:00 AM	Tucker, James	P/UP	ECAR	Insurance	103029
1022	03/01/2001	11:00 AM	Smith, Robert	W/IN	FCAR	Fleet	Q345T1
1022	03/05/2001	8:00 AM	Verhoist, Laura	DEL	ECAR		104439
1022	03/05/2001	2:30 PM	Stein, Amy	W/IN	STAR	Retail	104528
9833	03/02/2001	11:45 AM	Atteberry, James			Retail	182045
9833	03/15/2001	5:00 PM	Howard, Ron	CWC	FCAR	Corporate	454657
9833	04/11/2001	8:45 AM	Johnston, Johnny	DEL/R	FCAR	Insurance	BMW3ZR
9844	01/01/2001						645RTG
9855	02/02/2002		This is a really long name used to show wrapping	W/IN			RE1234
9866	03/03/2003						HDF22S
9877	04/04/2004						L33THG
9888	05/05/2005						SCR177

Records Found: 13

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### 1.3 Reservation Detail

1.3.1 The system displays the option for the user to Print. This action prints the details of the Reservation

The user may select the print option at any time while creating, editing or viewing a reservation.

#### 1.3.2 Print (Reservation Detail)

This function prints the Reservation Detail.

#### 1.3.3 Print Output

The records when printed should look like this.

**Reservation Details**

JOURIS, JON      DELIVERY      09/27/01      10:30 AM      FCAR  
Reservation: SR2547      Date Taken: 09/19/01      By: Mary Schmitz

**Vehicle**

Car Class: FCAR

Rate Quoted: 25.99 day; 150 miles a day; .25 excess miles  
295.99 week; 1050 miles a week; .25 excess miles  
985.00 month; 3000 miles a month; .25 excess miles

Product/Services: CDW (Collision Damage Waiver) 15.00 per day  
PAI (Personal Accident Insurance) 2.00 per day  
Drop Fee 10.00

Preferences: RENTER STRONGLY PREFERS A 4-DOOR CHEVY MALIBU, RED, THAT DOES NOT SMELL LIKE SMOKE.

**Pick Up/Delivery**

Pick Up Date: September 27, 2001      Directions: TAKE 40 TO THE BRENTWOOD EXIT. TURN LEFT ONTO BRENTWOOD. GO PAST CLAYTON, TAKE THE NEXT LEFT INTO CORPORATE PARK. PARK IN FRONT OF THE SECOND BUILDING (600 CORPORATE PARK).  
Pick Up Time: 10:30 AM  
Return Date: September 30, 2001  
Return Time:   
Pick Up Method: Delivery  
Pick Up Location: OFFICE

**Renter**

JOURIS, JON      Home: (314) 867-5309  
600 CORPORATE PARK      Work: (314) 512-5000  
ST. LOUIS, MO 63105

**Rental Types**      Insurance      Primary Payment Method: Credit Card

Bill To: FARMERS - ST. LOUIS      Authorization Status: Authorized  
SUITE 201      Daily Rate Authorized: 25.99  
1234 INSURANCE ROAD      Claim Type: Claimant  
CHESTERFIELD, 63017 MO  
Contact: JOHN DOE      Claim#/PO#/RO#: Claim# 123456  
Shop: JOE'S AUTOBODY      Renter's Vehicle: 1998 Chevrolet Malibu  
12633 MANCHESTER RD  
MANCHESTER, MO 63021

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#### 1.4 Reservation List Report Screen

1.4.1 The system displays the option for the user to Print List:

##### 1.4.2 Print List

This function prints the list that is currently displayed to the user.

##### 1.4.3 Print Output

The records when printed should look like the print below.

Reservation List - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

## Reservation List

Group: 01      Branch: All  
Date: 05/09/2001

GP/BR	Pickup Date	Pickup Time	Renter Name	Pickup Method	Pickup Location	Car Class	Preference	Reservation Type
1022	02/28/2001	8:30 AM	Smith, Roger	P/UP	Airport	MVAR		Retail
1022	03/01/2001	8:00 AM	Tucker, James	P/UP	Office	ECAR		Insurance
1022	03/01/2001	11:00 AM	Smith, Robert	W/IN		FCAR		Fleet
1022	03/05/2001	8:00 AM	Verhoist, Laura	DEL		ECAR		
1022	03/05/2001	2:30 PM	Stein, Amy	W/IN		STAR		Retail
0133	03/02/2001	11:45 AM	Atteberry, James					Retail
0133	03/15/2001	5:00 PM	Howard, Ron	CWC		FCAR	2dr car with performance	Corporate
0133	04/11/2001	8:45 AM	Johnston, Johnny	DEL/R	At the corner of 5th and Main	FCAR		Insurance
0144	01/01/2001							
0155	02/02/2002		This is a really long name used to show wrapping	W/IN				
0166	03/03/2003							
0177	04/04/2004							
0188	05/05/2005							

Records Found: 13

Done Computer





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Reservation Summary - Microsoft Internet Explorer provided by Enterprise Rent-a-Car							
Time	ECAR	CCAR	ICAR	FCAR	MVAR	XPAR	Summary
1:00 PM	2						ECAR (2)
2:00 PM	2						ECAR, CCAR
2:30 PM	1						SCAR
3:00 PM	4						CCAR (3), ICAR
3:30 PM	1						CCAR
4:00 PM	4						ECAR, CCAR, SCAR, FCAR
4:30 PM	4	1					ICAR, SCAR, FCAR, MVAR
5:00 PM	5						CCAR, ICAR, FCAR (2), MVAR
5:30 PM	4						CCAR (2), FCAR, MVAR
6:00 PM	5						ECAR, CCAR, ICAR, FCAR, XPAR
6:30 PM	1						FCAR
7:00 PM	3						ECAR, ICAR, SCAR
7:30 PM	1						ICAR
8:00 PM	1						ECAR
8:30 PM	2						CCAR, SCAR
9:00 PM	2						CCAR, FCAR
9:30 PM	2						CCAR, ICAR
10:00 PM	1						CCAR
10:30 PM							
No Date	20						

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## 1.6 Renter Search

### 1.6.1 Print Current Page

This function prints the records that are currently being displayed on the screen.

(NOTE: If the result set is broken down into groups of 20, this function will print the current set of 20 records regardless if they are all displayed on the screen.)

### 1.6.2 Print All Records

This function prints all the records that were returned from a search.

### 1.6.3 Print Output

The records when printed should look like this for both options: Print Current Page and Print All Records. If the amount of records exceeds one page, the column headers should appear at the top of every page.

Name	Address	Phone Number	Date of Birth
Atteberry, James	2002 Mateus Apt B, Maryland Heights	(444) 444-4444 (H) (314) 512-3479 (W)	11/20/1971
Bond, James	Classified, Unknown		
Doe, Jane	123 West Main, Anywhere		1/2/1943
Jenson, George	5 Spacely, Apt 4, Sprockets	(213) 547-4798 ext 45678(W) (541) 789-1234 (O)	
Lobohecski, Steve			
Mathews, Mike			
Pujols, Albert			
Sattaluri, Chakravarthy			
Smith, Ozzie			
Vina, Fernando			

Records Found: 10

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## 1.7 Employee Search

### 1.7.1 Print Current Page

This function prints the records that are currently being displayed on the screen.

(NOTE: If the result set is broken down into groups of 20, this function will print the current set of 20 records regardless if they are all displayed on the screen.)

### 1.7.2 Print All Records

This function prints all the records that were returned from a search.

### 1.7.3 Print Output

The records when printed should look like this for both options: Print Current Page and Print All Records. If the amount of records exceeds one page, the column headers should appear at the top of every page.

Employee Search Results - Microsoft Internet Explorer provided by Enterprise Rent-a-Car				
Employee Search Results				
Name	Number	Group/Branch	Department	Title
Adams, Edward	12345	0101 - Group Name - Branch Name	D/R	BRANCH MANAGER
Adams, Mark	23456	0202 - Group Name - Branch Name	MIS	BUSINESS ANALYST II
Adkins, Cindy	34567	0303 - Group Name - Branch Name	USED CAR	DETAILER
Ahne, Susan	46789	0404 - Group Name - Branch Name	ADMIN	DEPARTMENT MANAGER
Alagappiranar, Seenivasan	87954	0505 - Group Name - Branch Name	NAT RES	BRANCH MANAGER
Albers, Jeri	5641G	0606 - Group Name - Branch Name	D/R	BUSINESS ANALYST II
Allen, Karen	6547E	0707 - Group Name - Branch Name	MIS	DETAILER
Alves, Pam	6542D	0101 - Group Name - Branch Name	USED CAR	DEPARTMENT MANAGER
Anantharam, Parasuram	6546F	0202 - Group Name - Branch Name	ADMIN	BRANCH MANAGER
Andrews, Kurt	1657F	0303 - Group Name - Branch Name	NAT RES	BUSINESS ANALYST II
Bagby, Dawn	5456E	0404 - Group Name - Branch Name	D/R	DETAILER
Bagby, James	5465Q	0505 - Group Name - Branch Name	MIS	DEPARTMENT MANAGER
Bankston, Mary	24352	0606 - Group Name - Branch Name	USED CAR	BRANCH MANAGER
Baron, Bill	4564F	0707 - Group Name - Branch Name	ADMIN	BUSINESS ANALYST II
Bates, Chris	57465	0101 - Group Name - Branch Name	NAT RES	DETAILER
Bjornson, John	6757J	0202 - Group Name - Branch Name	D/R	DEPARTMENT MANAGER
Blank, Shannon	43654	0303 - Group Name - Branch Name	MIS	BRANCH MANAGER
Chinault, Sharon	6783G	0404 - Group Name - Branch Name	USED CAR	BUSINESS ANALYST II
Clemons, Brad	3245S	0505 - Group Name - Branch Name	ADMIN	DETAILER
Cole, Scott	2435R	0606 - Group Name - Branch Name	NAT RES	DEPARTMENT MANAGER
Concannon, Maribeth	3456U	0707 - Group Name - Branch Name	MLB	CARDS FAN
Cooley, Tracey	34532J	0808 - Group Name - Branch Name	MIS	SYSTEMS ANALYST
Records Found: 23				

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## 1.8 Account Search

### 1.8.1 Print Current Page

This function prints the records that are currently being displayed on the screen.

(NOTE: If the result set is broken down into groups of 20, this function will print the current set of 20 records regardless if they are all displayed on the screen.)

### 1.8.2 Print All Records

This function prints all the records that were returned from a search.

### 1.8.3 Print Output

The records when printed should look like this for both options: Print Current Page and Print All Records. If the amount of records exceeds one page, the column headers should appear at the top of every page.

Account Search Results - Microsoft Internet Explorer provided by Enterprise Rent-a-Car							
Account Search Results							
Name	Number	Type	Owning Gp/Br	Address	City	State	Zip Phone Number
A Collector's Bookstore**	GE1658	Corporate	0101	6275 Delmar	St. Louis	MO	63130 (314) 721-6127
A.f.j. Remodeling Co**	GE1225	Corporate	0102	312 Oak Pk. Village Dr.	Wildwood	MO	63040 (636) 458-1552
Accent Lincoln-mercury**	129498	Dealership	0103	9700 Manchester Rd	St. Louis	MO	63119 (314) 968-5300
Advantage Decorating**	GE0853	Corporate	0104	1601 North 7th St.	St. Louis	MO	63102 (314) 436-1419
African Amer. Rite Of Passage**	GE1538	Corporate	0105	325 Debaliviere	St. Louis	MO	63112 (314) 361-2268
Ahzad Bogosian**	GE0830	Corporate	0106	7743 Arthur	St. Louis	MO	63117 (314) 645-3076
Aig-cs**	GE0238	Corporate	0107	120 S Central, Ste 300	St. Louis	MO	63105 (000) 000-0000
Al-pac, Inc.**	GE1350	Corporate	0108	18535 Old Hwy 66	Pacific	MO	63069 (636) 271-8222
Albertin Auto Body Inc**	G08868	Bodyshop	0109	8449 Page	St. Louis	MO	63130 (314) 423-9924
Allen*Iynette*	E75477	Employee	0110	600 Glen Addie	Shiloh	IL	62221 (314) 863-0055

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Account Search Results - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Central Auto Body**	129765	Bodyshop	0107	3130 So. Big Bend	St. Louis	MO	63143	(314) 644-2151
Central Realty**	G15825	Corporate	0108	15a North Meramec Ave	St. Louis	MO	63105	(314) 862-5557
Christ Memorial Baptist Church**	GE1214	Corporate	0109	206 Emerling Drive	St. Louis	MO	63121	(314) 521-1958
Christ Memorial Lutheran Youth**	GE1093	Corporate	0110	9712 Tesson Ferry Road	St. Louis	MO	63123	(314) 631-0304
Christopher Desilets, Attorney**	GE2351	Corporate	0101	6556 Mardel Ave	St. Louis	MO	63109	(314) 646-0715
Chubb Grp-st. Louis**	CHB0101	Insurance	0102	7733 Forsyth Suite 1300	St. Louis	MO	63105	(314) 863-6519
Church Of The Shepard**	01A0299	Corporate	0103	4116 Mcclay Rd	St. Charles	MO	63304	(314) 441-6765
Churchill School**	G18242	Corporate	0104	1035 Price School Ln.	St. Louis	MO	63124	(314) 997-4343
City Of St. Louis-parks Dept**	GE1238	Corporate	0105	3600 Clayton Ave-forest Park	St. Louis	MO	63110	(314) 289-5310
Classic Refinishers**	129469	Other	0106	3714 Holt	St. Louis,	MO	63116	(314) 773-7548
Clayton Chamber Of Commerce**	GE9999	Corporate	0107	777 Bonhomme	St. Louis	MO	63105	(000) 000-0000

Records Found: 23

Done

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When an individual note is printed, the output should look like this:

**Res Note Details - Microsoft Internet Explorer provided by Enterprise Rent-a-Car**

File Edit View Favorites Tools Help

## Reservation Note Details

<b>Reservation:</b> 456789	<b>Renter:</b> Christopher Smith
<b>Date Note Created:</b> 09/11/2001	<b>Status:</b> Open
	<b>Created By:</b> ECARS 2.0 User
<b>Time Note Created:</b> 3:05 PM	<b>Note Type:</b> System
	<b>ARMS Msg:</b> Sent

**Note Text:**

PREFERS A RED CAR WITH TINTED WINDOWS AND A SUNROOF. THIS SHOWS THE ABILITY OF THE SYSTEM TO HANDLE A LONG NOTE. IT ALSO SHOWS THE BASIC LAYOUT OF THE NOTE WHEN THE DETAILS OF A SINGLE NOTE ARE PRINTED.

Done



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## 1.10 Reservation Retro (NOT part of the pilot release)

1.10.1 The system displays the option for the user to print a Reservation Retro statement. This action prints the details of the Reservation in a Retro format.

1.10.2 Print (Reservation Retro). This function prints the Reservation Retro.

1.10.3 Print Output. The records when printed should look like this.

Reservation Retro - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Address Y:\APPS\Ecars\_20\Development Projects\HTML\Reservation\Reservation Printing\ResRetro.html

ARMS Identification

<b>JOURIS, JON</b>	<b>DELIVERY</b>	<b>09/27/01</b>	<b>10:30 AM</b>	<b>FCAR</b>
Reservation: SR2547	Date Taken: 09/19/01	By: Mary Schmitz	Referral Source: Referral	

<b>Vehicle</b>		<b>Preferences:</b> Renter strongly prefers a 4-door Chevy Malibu, Red, that does not smell like smoke.
<b>Car Class:</b> FCAR		
<b>Rate Source:</b> Rate Source		
<b>Rate Plan:</b> Rate Plan		
<b>Rate Quoted:</b> \$25.99 day; 150 miles a day; .25 excess miles		
\$295.99 week; 1050 miles a week; .25 excess miles		
\$985.00 month; 3000 miles a month; .25 excess miles		
<b>Product/Services:</b> CDW (Collision Damage Waiver) \$15.00 per day		
PAI (Personal Accident Insurance) \$2.00 per day		
Drop Fee \$10.00		

<b>Pick Up/Delivery</b>		<b>Directions:</b> TAKE 40 TO THE BRENTWOOD EXIT. TURN LEFT ONTO BRENTWOOD. GO PAST CLAYTON, TAKE THE NEXT LEFT INTO CORPORATE PARK. PARK IN FRONT OF THE SECOND BUILDING (600 CORPORATE PARK).
<b>Pick Up Date:</b> September 27, 2001		
<b>Pick Up Time:</b> 10:30 AM		
<b>Pick Up Method:</b> Delivery		
<b>Pick Up Location:</b> OFFICE		
<b>Return Date:</b> September 30, 2001		
<b>Return Time:</b> 4:30 PM		
<b>Return Method:</b> Drop Off		
<b>Return Location:</b> DEALER		

<b>Renter Information</b>	<b>Home:</b> (314) 867-5309
JOURIS, JON	<b>Work:</b> (314) 512-5000
600 CORPORATE PARK	<b>Other:</b> (636) 274-8265
CLAYTON, MO 63105	

<b>Rental Type:</b> Insurance	<b>Customer Payment Method:</b> Credit Card
<b>Status of D-Bill:</b> In Limbo	
<b>Bill To:</b> FARMERS - ST. LOUIS	<b>Authorization Status:</b> Authorized
SUITE 201	<b>Daily Rate Authorized:</b> 25.99 + tax/surcharge
1234 INSURANCE ROAD	<b>Claim Type:</b> Claimant
CHESTERFIELD, 63017 MO	
(636) 287-2385	
<b>Contact:</b> JOHN DOE	<b>Claim#/PO#/RO#:</b> Claim# 123456
<b>Shop:</b> JOE'S AUTOBODY	<b>Renter's Vehicle:</b> 1998 Chevrolet Malibu
12633 MANCHESTER RD	
MANCHESTER, MO 63021	
(636) 773-9912	

**Disclosures**  
Disclosure statements will go here.

**Special Instructions**  
Special Instructions will go here.

Done Local intranet

**<Company Name>**

DATE	TIME	LOCATION	TYPE	REMARKS
1911	10:30	1000 ft	1000 ft	1000 ft
1912	11:00	1000 ft	1000 ft	1000 ft
1913	11:30	1000 ft	1000 ft	1000 ft
1914	12:00	1000 ft	1000 ft	1000 ft
1915	12:30	1000 ft	1000 ft	1000 ft
1916	13:00	1000 ft	1000 ft	1000 ft
1917	13:30	1000 ft	1000 ft	1000 ft
1918	14:00	1000 ft	1000 ft	1000 ft
1919	14:30	1000 ft	1000 ft	1000 ft
1920	15:00	1000 ft	1000 ft	1000 ft
1921	15:30	1000 ft	1000 ft	1000 ft
1922	16:00	1000 ft	1000 ft	1000 ft
1923	16:30	1000 ft	1000 ft	1000 ft
1924	17:00	1000 ft	1000 ft	1000 ft
1925	17:30	1000 ft	1000 ft	1000 ft
1926	18:00	1000 ft	1000 ft	1000 ft
1927	18:30	1000 ft	1000 ft	1000 ft
1928	19:00	1000 ft	1000 ft	1000 ft
1929	19:30	1000 ft	1000 ft	1000 ft
1930	20:00	1000 ft	1000 ft	1000 ft
1931	20:30	1000 ft	1000 ft	1000 ft
1932	21:00	1000 ft	1000 ft	1000 ft
1933	21:30	1000 ft	1000 ft	1000 ft
1934	22:00	1000 ft	1000 ft	1000 ft
1935	22:30	1000 ft	1000 ft	1000 ft
1936	23:00	1000 ft	1000 ft	1000 ft
1937	23:30	1000 ft	1000 ft	1000 ft
1938	24:00	1000 ft	1000 ft	1000 ft
1939	24:30	1000 ft	1000 ft	1000 ft
1940	25:00	1000 ft	1000 ft	1000 ft
1941	25:30	1000 ft	1000 ft	1000 ft
1942	26:00	1000 ft	1000 ft	1000 ft
1943	26:30	1000 ft	1000 ft	1000 ft
1944	27:00	1000 ft	1000 ft	1000 ft
1945	27:30	1000 ft	1000 ft	1000 ft
1946	28:00	1000 ft	1000 ft	1000 ft
1947	28:30	1000 ft	1000 ft	1000 ft
1948	29:00	1000 ft	1000 ft	1000 ft
1949	29:30	1000 ft	1000 ft	1000 ft
1950	30:00	1000 ft	1000 ft	1000 ft

<Project Name>	Version: <1.0>
Supplementary Specification	Date: <dd/mm/yy>
<document identifier>	

## Revision History

Date	Version	Description	Author
04/20/2001	1.0	Created Document	Johnny S. Johnston
04/24/2001	1.1	Updated for final items and added panel prototypes	Johnny S. Johnston
09/04/2001	1.2	Updated to reflect changes from Navigation use case.	James Atteberry
10/03/2001	1.3	Added screen shot for Reservation Pilot version.	James Atteberry
11/08/2001	1.4	Added requirements that Group is disabled for Reservation Pilot, and that searching by res number will not go outside of group.	James Atteberry

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20. Security

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1. The purpose of this document is to provide a detailed description of the security requirements for the system.

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## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Reservation Search screen, and its related screens.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Simple Search

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**Reservation Search Criteria - Basic - Microsoft Internet Explorer provided by Enterprise Rent-a-Car**

Reservation | Contracts | Callbacks

Detail | Summary | Forecasting | Notification | **Search**

**Reservation Search**

Group:  Branch:  [Advanced Search](#)

Renter Last Name:  Renter First Name:  Renter Telephone Number:  Reservation Number:

GP/BR	Pickup Date	Pickup Time	Renter Name	Pickup Method	Car Class	Reservation Type	Reservation Number
1022	02/28/01	8:30 AM	Smith, Roger	Pick-Up	MVAR	Retail	103453
1022	03/01/01	8:00 AM	Tucker, James	Pick-Up	ECAR	Insurance	103029
1022	03/01/01	11:00 AM	Smith, Robert	Walk-In	FCAR	Fleet	Q345T1

Items 1 - 10 of 50 found [Prev](#) [1](#) [2](#) [3](#) [4](#) [5](#) [Next](#)

Res - 411781 | Tkt - 234567 | Cbk - 363221

Figure 1 – Simple Search



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Reservation Search Criteria - Basic - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help Links

Reservation Contracts Callbacks

Detail Summary Forecasting Notification **Search**

### Reservation Search

Group: 01 - St. Louis Branch: The First Branch [Advanced Search](#)

Renter Last Name: Renter First Name: Renter Telephone Number: Reservation Number:

GP/BR	Pickup Date	Pickup Time	Renter Name	Pickup Method	Car Class	Reservation Type	Reservation Number
1022	02/28/01	8:30 AM	Smith, Roger	P/UP	MVAR	Retail	103453
1022	03/01/01	8:00 AM	Tucker, James	P/UP	ECAR	Insurance	103029
1022	03/01/01	11:00 AM	Smith, Robert	W/IN	FCAR	Fleet	Q345T1

Items 1 - 10 of 50 found [Prev](#) [1](#) [2](#) [3](#) [4](#) [5](#) [Next](#)

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Figure 1.1 – Simple Search – Reservation Pilot version

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### 3. Advanced Search

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Reservation Search Entry - Advanced - Microsoft Internet Explorer provided by Enterprise Rent-A-Car

File Edit View Favorites Tools Help Links e

Reservation Search Contracts Callbacks

Detail Summary Forecasting Notification Search

### Reservation Search

Group: 01 - St. Louis Branch: The First Branch Simple Search

Renter Last Name: Renter First Name: Renter Telephone Number: Reservation Number:

Bill-To and Shop Customers  
☒ Account Name: ☐ Customer Number: Claim/Policy/P.O. Number:

Pickup Date From: To: Date Reservation Taken:

(MM/DD/YYYY) (MM/DD/YYYY) (MM/DD/YYYY)

Search Reset

SP/BR	Pickup Date	Pickup Time	Renter Name	Pickup Method	Car Class	Reservation Type	Reservation Number
1022	02/28/01	8:30 AM	Smith, Roger	P/UP	MVAR	Retail	103453
1022	03/01/01	8:00 AM	Tucker, James	P/UP	ECAR	Insurance	103029
1022	03/01/01	11:00 AM	Smith, Robert	W/IN	FCAR	Fleet	Q345T1
1022	03/05/01	8:00 AM	Verhoist, Laura	DEL	ECAR		104439

Print Current Page Print All Records New Reservation

Items 1 - 10 of 50 found Prev 1 2 3 4 5 Next

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Figure 2 – Advanced Search

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Reservation Search Criteria - Advanced - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help Links e

Reservation Search Contracts Callbacks

Detail Summary Forecasting Notification Search

### Reservation Search

Group: 01 - St. Louis Branch: The First Branch Simple Search

Renter Last Name: Renter First Name: Renter Telephone Number: Reservation Number:

Bill-To and Shop Customers  
☒ Account Name: ☐ Customer Number: Claim/Policy/P.O. Number:

Pickup Date From: To: Date Reservation Taken: Renter's License Plate:

(MM/DD/YYYY) (MM/DD/YYYY) (MM/DD/YYYY)

Search Reset

GP/BR	Pickup Date	Pickup Time	Renter Name	Pickup Method	Car Class	Reservation Type	Reservation Number
1022	02/28/01	8:30 AM	Smith, Roger	P/UP	MVAR	Retail	103453
1022	03/01/01	8:00 AM	Tucker, James	P/UP	ECAR	Insurance	103029
1022	03/01/01	11:00 AM	Smith, Robert	W/IN	FCAR	Fleet	Q345T1
1022	03/05/01	8:00 AM	Verhoist, Laura	DEL	ECAR		104439

Print Current Page Print All Records New Reservation

Items 1 - 10 of 50 found Prev 1 2 3 4 5 Next

Res - 411781 Tkt - 234567 Cbk - 363221

Figure 2.1 – Advanced Search – Reservation Pilot version

Select a Date

< April 2001 >

Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Cancel

Figure 3 - Calendar selection

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## 4. Group

### 4.1 Behavior

This search criterion will be limited to those groups that exist at any point in time for which the search is being executed. The selection of "All" is also included, and will appear at the top, or first, in the list. This search criteria area will be a drop-down box. The users would also like to have the ability to type a character, alpha or numeric, into the criteria area and have the drop down list position to the character. (If the user enters an "H" the drop down list would position to the first string beginning with "H" in the list) The default item should be the group associated to the terminal locale.

For Reservation Pilot only, this box will default to the location's group, and cannot be changed.

### 4.2 Validation

The items appearing in the list are static; the user cannot add items to the list dynamically. This should, in some manner, be initially defaulted to the terminal's group, (based on physical location)

### 4.3 Business Exceptions

None identified at this time.

### 4.4 System Exceptions

None identified at this time.

## 5. Branch

### 5.1 Behavior

This search criterion will be limited to those branches that exist within the group at any point in time for which the search is being executed. The selection of "All" is also included, and will appear at the top, or first, in the list. This search criteria area will be a drop-down box. The users would also like to have the ability to type a character, alpha or numeric, into the criteria area and have the drop down list position to the character. (If the user enters an "H" the drop down list would position to the first string beginning with "H" in the list)

The default item should be the branch associated to the terminal locale. Branch items appearing in the list will be limited to the Group item selected. Once the selected Group item has changed, the first item (All) will be the default selection item.

### 5.2 Validation

The items appearing in the list are static; the user cannot add items to the list dynamically. This should, in some manner, be initially defaulted to the terminal's branch, (based on physical location).

This list will be limited to the branches associated with the group selected.

### 5.3 Business Exceptions

None identified at this time.

### 5.4 System Exceptions

None identified at this time.

## 6. Renter Name Last / First

### 6.1 Behavior

This search criteria area will be a text field containing an implied wildcard after the entered criteria. The First Name field will not be enabled until search criteria has been entered into the Last Name field. Thus, the First Name field will not be accessible via either the tab key or the mouse unless Last Name data is present.

It should be noted that either **Last Name** or **Last Name and First Name** used in combination, is

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considered to be just one search criteria.

It will return exact matches for the characters entered and will continue with other text strings that match the characters entered, but are of a longer length (an implied wildcard). Example: If the **Last Name** search criteria entered were "Smith", you would receive back every open ticket with "Smith" in the Last name. You would also receive every character string that matched "Smith" for the first 5 characters, but was longer than five characters. Given this, you would also receive, "Smither", "Smithson", "Smithy", etc. These longer character matches would be alphabetically ascending after the exact character matches of equal length. The **First Name** field behaves in the same manner.

## 6.2 Validation

Limited to, or constrained by, the Group and Branch indicated or selected.

## 6.3 Business Exceptions

None identified at this time.

## 6.4 System Exceptions

None identified at this time.

# 7. Renter Telephone Number

## 7.1 Behavior

This search criteria area will be an alphanumeric field. It will not be formatted for presentation purposes. Returns exact matches for the characters entered. A phone number is considered to be the entire number including area code. Example: In the United States, it would be the 3 digit area code, plus the seven digit phone number. (Country Code is not considered a part of the phone number.) The search will be on all phone number fields associated with the Driver/Renter. Currently, these are Home, Office and Other. If the same phone number is found in multiple areas for the same reservation, the reservation will only be displayed once.

## 7.2 Validation

Limited to, or constrained by, the Group and Branch indicated or selected.

## 7.3 Business Exceptions

None identified at this time.

## 7.4 System Exceptions

None identified at this time.

# 8. Reservation Number

## 8.1 Behavior

This search area will be an alphanumeric field. It will return exact matches for the characters entered. When this search criterion is used, any other entered criteria will be ignored by the system. Alphanumeric values will be accepted into this field.

For Reservation Pilot only, the search will be limited to the location's group. All other search criteria will be ignored.

## 8.2 Validation

Any entry into this field constitutes a global search of all groups and branches. It will override the default, or selected, group and branch.

## 8.3 Business Exceptions

None identified at this time.

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## 8.4 System Exceptions

None identified at this time.

## 9. Account Name

### 9.1 Behavior

This search criteria area will be a text field with an implied wild card search after the last character. There is a radial button associated with this criteria area. Upon initial entry, the button will default to Account Name.

It will return exact matches for the characters entered and will continue with other text strings that match the characters entered, but are of a longer length.

An entry into this field will search two roles that a customer may be and return all matches. Currently, the roles to which the number search may be applied are "Shop" and "Bill-To".

### 9.2 Validation

Limited to, or constrained by, the Group and Branch indicated or selected.

### 9.3 Business Exceptions

The user may not select the Account Name and the Customer Number Radial button. The two are mutually exclusive.

### 9.4 System Exceptions

The system prohibits selecting both buttons. It must be one or the other.

## 10. Customer Number

### 10.1 Behavior

This search criteria area will be an alphanumeric field.

There is a radial button associated with this criteria area. Upon initial entry, the button will default to Account Name. This radial button can be switched to initiate a customer number search when the user selects the Customer number radial button.

It will return exact matches for the characters entered. An entry into this field will search two roles that a customer may be and return all matches. Currently, the roles to which the number search may be applied are "Shop" and "Bill-To".

### 10.2 Validation

Limited to, or constrained by, the Group and Branch indicated or selected.

### 10.3 Business Exceptions

The user may not select the Account Name and the Customer Number Radial button. The two are mutually exclusive.

### 10.4 System Exceptions

The system prohibits selecting both buttons. It must be one or the other.

## 11. Claim/Policy/P.O./R.O. Number

### 11.1 Behavior

This search criteria area will be an alphanumeric field. It will return exact matches for the characters entered.

### 11.2 Validation

Limited to, or constrained by, the Group and Branch indicated or selected.

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### 11.3 Business Exceptions

None identified at this time.

### 11.4 System Exceptions

None identified at this time.

## 12. Range of Pick-Up Dates

### 12.1 Behavior

This search criteria area will be two numeric fields. A "From" and a "To" area are anticipated. Also, associated with each field, there should be some sort of calendar function available which would allow the user to select a date from a calendar icon, or similar feature, instead of entering a value. If the user selects a date from the calendar icons, it will be displayed in the date area formatted appropriately by the locale. (As determined for all locale specific formatting.) All of the From/To conditionals will still apply, if the date(s) are selected from this calendar feature. The range of dates which may be searched (in the future and past) will be dependent on the legacy system and the range of data stored there. It needs to be understood, that legacy system may have different retention rules than the GUI system.

Whether the user enters just a From date, or both From and To date, it is considered a single search criteria.

### 12.2 Validation

#### From search criteria area.

Alphanumeric values will be accepted into this area.

It will not be formatted for presentation purposes.

The user may enter delineating characters, but these will be stripped out before searching the database to find an exact date match.

It will be the date appropriate to the locale of the branch where the pick-up of the vehicle is expected.

#### To search criteria area:

Alphanumeric values will be accepted into this area.

It will not be formatted for presentation purposes.

The user may enter delineating characters, but these will be stripped out before searching the database to find an exact date match.

This area is not enabled until an entry has been made into the From area.

If there is no entry into the From area the To area remains disabled.

It will be the date appropriate to the locale of the branch where the pick-up of the vehicle is expected.

### 12.3 Business Exceptions

**FROM** - None identified at this time.

**TO** - If the user does not enter a value into the To field, it will default to the same value as the From field. If the user enters a value into the second field, the To field, it must be greater than, or equal to the value in the first field, the From field.

### 12.4 System Exceptions

**FROM** - None identified at this time.

**TO** - The system would provide an error message. See the "error message" supplemental spec for exact text."



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### **13. Date Reservation Taken**

#### **13.1 Behavior**

This search criteria area will be an alphanumeric field. It will not be formatted for presentation purposes. The user may enter delineating characters, but these will be stripped out before searching the database to find an exact date match. It will be the date appropriate to the locale of the branch where the reservation was created.

#### **13.2 Validation**

It cannot be for a date in the future.

#### **13.3 Business Exceptions**

The system would provide an error message. See the "error message" supplemental spec for exact text.

#### **13.4 System Exceptions**

None identified at this time.

### **14. Renter's License Plate**

#### **14.1 Behavior**

This search criteria area will be an alphanumeric field. It will return exact matches for the characters entered. This field will not appear if the screen is displayed with a US or Canada locale.

#### **14.2 Validation**

Limited to, or constrained by, the Group and Branch indicated or selected.

#### **14.3 Business Exceptions**

None identified at this time.

#### **14.4 System Exceptions**

None identified at this time.

### **15. Advanced Search / Simple Search hyperlink**

#### **15.1 Behavior**

By clicking on the Advanced Search hyperlink, the user is presented with the advanced search functionality. Alternatively, by clicking on the Simple Search hyperlink, the user is presented with the default search screen. Any search criteria entered when on the default Simple Search screen will be passed to the Advanced Search screen if/when accessed. If the user navigates to the Simple Search screen from the Advanced Search screen, any search criteria shared by both screens will be passed to the Simple Screen. Any search criteria valid only on the Advanced Screen be lost.

#### **15.2 Validation**

Must have at least one search criteria entered, not considering Group and Branch.

#### **15.3 Business Exceptions**

An error message stating the "A minimum of at least one search criteria must be entered" should be presented to the user.

#### **15.4 System Exceptions**

None identified at this time.

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## 16. Results Display Area

### 16.1 Behavior

The result display will initially be blank on first presentation of the panel and until at least one search is executed and at least one record is found that matches the search criteria.

This display area provides the user with the search result list. The result list will be comprised of 8 static columns. The specific column order is:

- 1) The group number and branch number will be concatenated to form this column.
- 2) The pick up date is the next column, formatted by locale.
- 3) The pick up time is the next column, formatted by locale.
- 4) The renter's last name and first name will be concatenated to form this column.
- 5) The pick-up method.
- 6) The car class.
- 7) The reservation type.
- 8) The reservation number.

The display presentation for each type of information will adhere to result list standards.

The default sort order is:

- 1) Pick-up group and branch, in numeric ascending order.
- 2) Pick-up date, in chronologically in ascending order.
- 3) Pick-up time, in chronologically ascending order.
- 4) Renter last and first name, in alphabetically ascending order of last name.

The users would like to have the ability to sort the columns in both ascending and descending order. This will only sort the information displayed on the panel and not the entire result set. If the user selects to sort the display by a column, the default sort order will be the order of the remaining sorts, if the user chooses to sort on a column that is not included in the default sort order. If the user moves forward or backward within the result list, the sort on re-presentation of the list is the default sort. The user must select to sort on a specific column within the new display if they want a sort order other than the default.

The capability also needs to exist where a user can indicate or select an individual reservation from the result list, and perform a simple task, (a function button, icon, mouse click) which would then open the reservation for editing purposes. Within this display list the user would select the Renter Name from the display list and perform the designated function. This would be contingent upon the user having the appropriate security to edit the reservation selected. This functionality will be consistent and standard throughout the application.

### 16.2 Validation

The user may not select to edit a reservation that is outside of their security boundaries.

### 16.3 Business Exceptions

If a user attempts to edit a reservation that is outside of their security boundaries, an error message of "User is not authorized to edit this reservation" should be displayed.

### 16.4 System Exceptions

None identified at this time.

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## 17. Results Feedback Line Area

### 17.1 Behavior

This feedback area provides the user with the search result list count as well as list navigation.

#### Search Result Count

This area will display a count of the records currently being displayed in the result set area, as well as the total number of records returned in the result set area. The system will display the result set in blocks of 20. If the result set is fewer than 20, all the matches will be displayed. For example, if a search is returned that has 17 matches, this area will display "Items 1 - 17 of 17 Found". If the user is navigating through the result set and moves to the next block of 20 records, this area should update which set of records the user is currently viewing. For example, if the user has returned a search with 110 records, the system will initially display "Items 1 – 20 of 110 Found". If the user navigates to the next block, the system should display "Items 21 – 40 of 110 Found".

#### List Navigation Area

The user may select the block of records available as returned by the invoked search criteria. These blocks are identified by sequential numbers, along with a First (1<sup>st</sup> block of records) and Last (last block of records). Also appearing will be the Previous and Next. When negotiating through the result list the sequential numbers will change depending upon the block of records being viewed, other blocks of records can be accessed via the Previous and Next hyperlinks. The Previous and Next, and appropriate blocks, should be enabled or disabled according to the positioning of the list. For example, if the list were displaying the first set of several sets of records, the Previous function would be disabled. Similarly, if the list were displaying the last set of records the Next function would be disabled. #

This area will display the total number of records found for each search.

### 17.2 Validation

None identified at this time.

### 17.3 Business Exceptions

None identified at this time.

### 17.4 System Exceptions

Buttons and navigation areas would be enabled and disabled appropriately for position of result list display.

## 18. Button Line Area

### 18.1 Behavior

The Search image/button will invoke the search process, submitting the form to the server.

The Reset image/button will clear all of the search criteria areas on the panel, but not reset the group or branch or remove the result set, if one is displayed. It will also not affect the results display area.

The Print Current Page and Print All Records images/button are just placeholders. Their functionality and scope are outside of this use case and behavioral document.

The New Reservation button will create a new reservation, changing the screen to that transaction.

### 18.2 Validation

None identified at this time.

### 18.3 Business Exceptions

If A Reservation Number is entered, all other search criteria are ignored, including group and branch.

### 18.4 System Exceptions

At least one-search criteria must be entered, other than group and branch. If not, an error message stating

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“At lest one search criteria must be entered.”

## 19. Rules

The Renter Name Last / First and Account Name search criteria have an implied wild card character placed directly after the entered text, all other search criteria fields on this screen are to be treated as exact matches with searching.

There is a minimum of one-search criteria on which a search may be executed. This does not include the Group and Branch selections.

When there are not any matches to the input search criteria the user should be presented with a feedback message stating “Items 0 – 0 of 0 Found”.

If the search returns more reservations than can be displayed on the screen at one time, then the system needs to present to the user the range of records they are viewing out of the total number of records.

All of the above search criteria, EXCEPT Reservation Number, will be limited to, or constrained by, the Group and Branch indicated or selected.

## 20. Security

The user must have the appropriate security level to access this screen. The user is allowed to view or print anything. It is when they attempt to edit a reservation that their security restrictions will be enforced.

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<Company Name>

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## ECARS 2.0 - Insurance Detail Information Screen Action Specification

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## Revision History

Date	Version	Description	Author
04/12/2001	0.0	Created Template	Marty Tichy
04/16/2001	1.0	Created document	Maribeth Concannon
06/18/2001	1.1	Updated screen shots	Marty Tichy
09/04/2001	1.2	Updated spec with changes from Navigation use case.	James Atteberry
10/12/2001	1.3	Changed phone number field validations to use the same ones as the main driver screen.	James Atteberry

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## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Insurance Details screen.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Drivers – Insurance Detail

**Insurance Detail - Microsoft Internet Explorer provided by Enterprise Rent-a-Car**

**DRIVERS**  
James Atteberry  
Additional Drivers: 2

**REFERRAL**  
Account Name  
Contact Name

**DATES/RATES**  
08/27/2001; ECAR  
Daily Rate; ASD

**BILL-TO**  
Account Name  
Contact Name

**VEHICLE/SHOP**  
1997 Dodge Avenger  
Shop Account Name

**NOTES**  
Notes Taken: 1  
Changed: 08/27/2001

**Drivers - Insurance Detail** [Options]

Atteberry, James | Smith, Chris | Cloud, Kevin

Driver | Other Address | Insurance Detail | Cash Qualification

**Insurance Details**

Carrier | Agent | Phone

Insurance Company Contact | Policy Number | Expiration Date (MM/DD/YYYY)

Comprehensive Deductible | Collision Deductible | Liability?

Assigned Risk? | Lienholder Policy?

[Back] [Complete]

Res - 411781 | Tkt - 234567 | Cbk - 363221

**Figure 1 - Insurance Detail**

### 3. Reservation Number

#### 3.1 Behavior

This area shows the unique reservation number that has been assigned to the newly created reservation. The reservation number is 6 alphanumeric characters long. If another reservation is open, its reservation number will displayed in this area as well. The user will have the ability to have to 3 reservations open at a time. A hyperlink will be available on the reservation numbers of the reservations that are NOT currently

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being displayed. For the reservation that is currently displayed, the reservation number will not have a hyperlink available. This is to allow the user to navigate between the open reservations.

### 3.2 Validation

None identified at this time.

### 3.3 Business Exceptions

If the user tries to open a 4<sup>th</sup> reservation, the system will display a message stating, "A maximum of 3 reservations may be displayed."

### 3.4 System Exceptions

None identified at this time.

## 4. Insurance Details

### 4.1 Carrier

#### 4.1.1 Behavior

This is an alphanumeric field.

#### 4.1.2 Validation

No validation is necessary. See Rules regarding when the field is required.

#### 4.1.3 Business Exceptions

None have been identified at this time.

#### 4.1.4 System Exceptions

None have been identified at this time.

### 4.2 Agent

#### 4.2.1 Behavior

This is an alphanumeric field.

#### 4.2.2 Validation

No validation is necessary. The field is optional.

#### 4.2.3 Business Exceptions

None have been identified at this time.

#### 4.2.4 System Exceptions

None have been identified at this time.

### 4.3 Phone

#### 4.3.1 Behavior

This is an alphanumeric field. It should comply with the standard phone number field formatting. (06/05/2001- To date, no European considerations have been noted (waiting on update to Use Case).

Validation

The field is optional.

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See the Special Phone Number Requirements at the end of the document for validation specifics.)

#### 4.3.2 *Business Exceptions*

None have been identified at this time.

#### 4.3.3 *System Exceptions*

None have been identified at this time.

### 4.4 **Insurance Company Contact**

#### 4.4.1 Behavior

This is an alphanumeric field.

#### 4.4.2 Validation

No validation is necessary. See Rules regarding when the field is required.

#### 4.4.3 *Business Exceptions*

None have been identified at this time.

#### 4.4.4 *System Exceptions*

None have been identified at this time.

### 4.5 **Policy Number**

#### 4.5.1 Behavior

This is an alphanumeric field.

#### 4.5.2 Validation

No validation is necessary. See Rules regarding when the field is required.

#### 4.5.3 *Business Exceptions*

None have been identified at this time.

#### 4.5.4 *System Exceptions*

None have been identified at this time.

### 4.6 **Expiration Date**

#### 4.6.1 Behavior

Only numeric values and delineating characters will be accepted into this area.

Associated with this field is a calendar function that allows the user to select a date from a calendar screen instead of entering a value. Clicking on the calendar icon will display the screen; once a date is selected from the screen the Expiration Date field will be populated with the appropriate date.

See Rules regarding when the field is required.

#### 4.6.2 Validation

No validation is necessary. The field is optional.

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#### 4.6.3 *Business Exceptions*

None have been identified at this time.

#### 4.6.4 *System Exceptions*

None have been identified at this time.

### 4.7 **Comprehensive Deductible**

#### 4.7.1 Behavior

This is a numeric field.

#### 4.7.2 Validation

No validation is necessary. See Rules regarding when the field is required.

#### 4.7.3 *Business Exceptions*

None have been identified at this time.

#### 4.7.4 *System Exceptions*

None have been identified at this time.

### 4.8 **Collision Deductible**

#### 4.8.1 Behavior

This is a numeric field.

#### 4.8.2 Validation

No validation is necessary. See Rules regarding when the field is required.

#### 4.8.3 *Business Exceptions*

None have been identified at this time.

#### 4.8.4 *System Exceptions*

None have been identified at this time.

### 4.9 **Liability?**

#### 4.9.1 Behavior

The response is either 'Yes' or 'No', but the response is optional. There is no default value.

#### 4.9.2 Validation

No validation is necessary. See Rules regarding when the field is required.

#### 4.9.3 *Business Exceptions*

None have been identified at this time.

#### 4.9.4 *System Exceptions*

None have been identified at this time.

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#### **4.10 Assigned Risk?**

##### **4.10.1 Behavior**

The response is either 'Yes' or 'No', but the response is optional. There is no default value.

##### **4.10.2 Validation**

No validation is necessary. The field is optional.

##### **4.10.3 Business Exceptions**

None have been identified at this time.

##### **4.10.4 System Exceptions**

None have been identified at this time.

#### **4.11 Lienholder Policy?**

##### **4.11.1 Behavior**

The response is either 'Yes' or 'No', but the response is optional. There is no default value.

##### **4.11.2 Validation**

No validation is necessary. The field is optional.

##### **4.11.3 Business Exceptions**

None have been identified at this time.

##### **4.11.4 System Exceptions**

None have been identified at this time.

### **5. Button Line Area**

#### **5.1 Back Button**

The Back button will take the user to the main Driver screen for the currently selected driver.

##### **5.1.1 Validation**

None identified at this time.

##### **5.1.2 Business Exceptions**

None identified at this time.

##### **5.1.3 System Exceptions**

None identified at this time.

#### **5.2 Complete Button**

##### **5.2.1 Behavior**

The Complete button will initiate a save of the transaction. All validations will be performed, returning any errors to the user. If there are no errors, the transaction is saved, and the user is returned to the Reservation home page.

##### **5.2.2 Validation**

None identified at this time.

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5.2.3 *Business Exceptions*  
None identified at this time.

5.2.4 *System Exceptions*  
None identified at this time.

## 6. Rules

### 6.1 Required Fields

These fields are only required if information is present in any one of the following fields: Carrier, Policy Number, Expiration Date, Collision Deductible, Comprehensive Deductible, Liability, Insurance Company Contact. If the system determines that any of the listed fields are missing information, the system will present the user with a feedback message listing the incomplete required fields and directing them to complete them.

### 6.2 Saving

Because none of the information on the screen is required, the user can leave the screen at any time during the course of making or editing the reservation or while opening, editing or closing the open ticket. The save is completed when the user saves the reservation or ticket.

### 6.3 Tabbing

Tabbing between fields should be in the order that they are in this document.

## 7. Security

The user must have the appropriate security level to access this screen.

## 8. Special Phone Number Requirements

### 8.1 Overall Requirements

The database has fields for the area code and phone number.

Area codes and phone numbers in North America are numeric only. Legacy phone numbers for North America are numeric only.

Area codes and phone numbers in Europe may be characters or numbers. Legacy phone number for Europe are both characters and numbers.

### 8.2 Renter Specific

When navigating to a form with phone number fields, or when the page is submitted, the phone number fields will be formatted according to the system locale.

### 8.3 Insurance Phone Number

The user will have a single field to enter the phone number.

For North America, the user may enter numbers only. All special characters will be ignored during formatting, any characters will result in an error. A space is considered a special character.

For Europe, the user may enter characters or numbers. At least one special character must be entered. The first special character will indicate the break between the area code and the phone number. All other special characters are ignored.

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#### 8.4 Phone Number masking rules by country:

- The format for North America is (XXX) XXX-XXXX
- The format for Germany is: XXX.X.XX.XX.XX  
The area code may vary in length, and is determined by a special character entered by the user to indicate where the break occurs. If the length of the phone number (not including the area code) is odd, the first character is placed by itself as shown above, the remaining characters are paired up. If the length is even, all characters are paired up.
- The format for Ireland and the UK is XXX.XXX.XXX.XXX.X  
The area code may vary in length, and is dependent on the user entering a special character between the area code and phone number. The characters following the area code should be grouped in threes with any remaining characters grouped at the end.

<Company Name>

## Cash Qualification Screen Action Specification

[illegible]



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## Revision History

Date	Version	Description	Author
04/12/2001	0.0	Created Template	Marty Tichy
04/16/2001	1.0	Created Document	Maribeth Concannon
06/18/2001	1.1	Updated screen shots & doc title	Marty Tichy
09/04/2001	1.2	Updated screenshots to reflect changes from Navigation use case.	James Atteberry
11/13/2001	1.3	Updated w/ current phone requirements.	James Atteberry

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## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Insurance Details screen.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Screen Print

**CashQual1 - Microsoft Internet Explorer provided by Enterprise Rent-a-Car**

**Drivers - Cash Qualification** - Options -

**DRIVERS**  
James Atteberry  
Additional Drivers: 2  
**REFERRAL**  
Account Name  
Contact Name  
**DATES/RATES**  
08/27/2001; ECAR  
Daily Rate; ASD  
**BILL-TO**  
Account Name  
Contact Name  
**VEHICLE/SHOP**  
1997 Dodge Avenger  
Shop Account Name  
**NOTES**  
Notes Taken: 1  
Changed:

**Drivers**  
Atteberry, James | Smith, Chris | Cloud, Kevin

Driver	Other Address	Insurance Detail	Cash Qualification
<b>Cash Qualification</b> How long at the current address: 0 Years 0 Months Ownership:			
<b>Employment Verification</b> Employer   Position   How Long?     0 Years Supervisor's Name   Spoke To Whom   0 Months 			
<b>Rental Information</b> Reason for Renting: <input type="checkbox"/> Car In Shop <input type="checkbox"/> Weekend Rented Previously:			

Res - 411781 | Tkt - 234567 | Cbk - 363221

**Figure1 - Cash Qualification Address & Employment Verification**

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CashQual1 - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Reservation Budgets Call Center

**DRIVERS**  
James Atteberry  
Additional Drivers: 2

**REFERRAL**  
Account Name  
Contact Name

**DATES/RATES**  
08/27/2001; ECAR  
Daily Rate; ASD

**BILL-TO**  
Account Name  
Contact Name

**VEHICLE/SHOP**  
1997 Dodge Avenger  
Shop Account Name

**NOTES**  
Notes Taken: 1  
Changed:

**Drivers - Cash Qualification** - Options - Go X

Atteberry, James	Smith, Chris	Cloud, Kevin
------------------	--------------	--------------

Driver	Other Address	Insurance Detail	Cash Qualification
--------	---------------	------------------	--------------------

**Rental Information**

Reason for Renting: ☐ Car In Shop ☐ Weekend ☐ Vacation ☐ Other:

Rented Previously:   
If so, when?

Do you own a car?

**References (Three Different People)**

	First Name	Last Name	Phone Number	Relationship
1.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
3.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Res - 411781 Tkt - 234567 Cbk - 363221

**Figure 2 - Cash Qualification Rental Information**

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Open Ticket Cash Qual - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

Address: F:\html\Reservation\Navigation\TAPgcaurj71pj.htm

James    Chris    Kevin

**REFERRAL**

Referral sum 1    Driver    Other Address    Insurance Detail    Cash Qualification

Referral sum 2

**DATES/RATES**

Dates summary 1    ☐ Other:

Dates summary 2

**BILL-TO**

Bill-To summary 1    Do you own a car?

Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1

Vehicle/Shop 2

**NOTES**

Notes summary 1

Notes summary 2

**References (Three Different People)**

	First Name	Last Name	Phone Number	Relationship
1.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
3.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

**Authorized By**

User Id    Password

Res - 411781    Tkt - 234567    Cbk - 363221

My Computer

**Figure 3 - Cash Qualification**

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### 3. Top (see Figure 1)

#### 3.1 Years at current address

##### 3.1.1 Behavior

This is a drop down list of integers and zero. The drop down should start at 0 and go through 9, followed by "10+."

##### 3.1.2 Validation

No validation is necessary. The field is optional.

##### 3.1.3 Business Exceptions

None have been identified at this time.

##### 3.1.4 System Exceptions

None have been identified at this time.

#### 3.2 Months at current address

##### 3.2.1 Behavior

This is a drop down list of integers and zero. The drop down should start at 0 and go through 11.

##### 3.2.2 Validation

No validation is necessary. The field is optional.

##### 3.2.3 Business Exceptions

None have been identified at this time.

##### 3.2.4 System Exceptions

None have been identified at this time.

#### 3.3 Ownership

##### 3.3.1 Behavior

This is a drop down list of two values (own & rent) plus a blank. Since the selection is optional, it should default to blank.

##### 3.3.2 Validation

No validation is necessary. The field is optional.

##### 3.3.3 Business Exceptions

None have been identified at this time.

##### 3.3.4 System Exceptions

None have been identified at this time.



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#### **4. Employment Verification (see Figure 1)**

##### **4.1 Employer**

###### **4.1.1 Behavior**

This is an alphanumeric field.

###### **4.1.2 Validation**

No validation is necessary. The field is optional.

###### **4.1.3 Business Exceptions**

None have been identified at this time.

###### **4.1.4 System Exceptions**

None have been identified at this time.

##### **4.2 Position**

###### **4.2.1 Behavior**

This is an alphanumeric field.

###### **4.2.2 Validation**

No validation is necessary. The field is optional.

###### **4.2.3 Business Exceptions**

None have been identified at this time.

###### **4.2.4 System Exceptions**

None have been identified at this time.

##### **4.3 Supervisor's Name**

###### **4.3.1 Behavior**

This is an alphanumeric field.

###### **4.3.2 Validation**

No validation is necessary. The field is optional.

###### **4.3.3 Business Exceptions**

None have been identified at this time.

###### **4.3.4 System Exceptions**

None have been identified at this time.

##### **4.4 Spoke to Whom**

###### **4.4.1 Behavior**

This is an alphanumeric field.

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#### 4.4.2 Validation

No validation is necessary. The field is optional.

#### 4.4.3 Business Exceptions

None have been identified at this time.

#### 4.4.4 System Exceptions

None have been identified at this time.

### 4.5 Years at Employer

#### 4.5.1 Behavior

This is a drop down list of integers and zero. The drop down should start at 0 and go through 9, followed by "10+."

#### 4.5.2 Validation

No validation is necessary. The field is optional.

#### 4.5.3 Business Exceptions

None have been identified at this time.

#### 4.5.4 System Exceptions

None have been identified at this time.

### 4.6 Months at Employer

#### 4.6.1 Behavior

This is a drop down list of integers and zero. The drop down should start at 0 and go through 11.

#### 4.6.2 Validation

No validation is necessary. The field is optional.

#### 4.6.3 Business Exceptions

None have been identified at this time.

#### 4.6.4 System Exceptions

None have been identified at this time.

## 5. Rental Information (see Figure 2)

### 5.1 Reason for Renting

#### 5.1.1 Behavior

This is a choice among four values: Car in Shop, Weekend, Vacation, and Other. Since the selection is optional, it should default to nothing selected.

#### 5.1.2 Validation

The selection and description are optional.

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<document identifier>	

If Other is selected, then the field next to it is enabled to allow a description. The description is not required.

### 5.1.3 *Business Exceptions*

None have been identified at this time.

### 5.1.4 *System Exceptions*

None have been identified at this time.

## 5.2 **Rented Previously**

### 5.2.1 *Behavior*

This is a drop down of two values (yes & no) and a blank. Since the selection is optional, it should default to blank.

### 5.2.2 *Validation*

The selection and description are optional.

### 5.2.3 *Business Exceptions*

None have been identified at this time.

### 5.2.4 *System Exceptions*

None have been identified at this time.

## 5.3 **If so, when?**

### 5.3.1 *Behavior*

This is an alphanumeric field. If the answer to "Rented Previously" is Yes, then this field is enabled to allow an answer. The answer is not required.

### 5.3.2 *Validation*

The selection and description are optional.

### 5.3.3 *Business Exceptions*

None have been identified at this time.

### 5.3.4 *System Exceptions*

None have been identified at this time.

## 5.4 **Do you own a car?**

### 5.4.1 *Behavior*

This is a drop down of two values (Yes & No) and a blank. Since the selection is optional, it should default to blank.

### 5.4.2 *Validation*

The selection is optional.

### 5.4.3 *Business Exceptions*

None have been identified at this time.

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#### 5.4.4 System Exceptions

None have been identified at this time.

## 6. **References (see Figure 2)**

This section is not a dynamic list but rather a set of 3 names and associated information (below) which can be entered by the user.

### 6.1 **First Name (column)**

#### 6.1.1 Behavior

This is an alphanumeric field.

#### 6.1.2 Validation

No validation is necessary. The field is optional.

#### 6.1.3 Business Exceptions

None have been identified at this time.

#### 6.1.4 System Exceptions

None have been identified at this time.

### 6.2 **Last Name (column)**

#### 6.2.1 Behavior

This is an alphanumeric field.

#### 6.2.2 Validation

No validation is necessary. The field is optional.

#### 6.2.3 Business Exceptions

None have been identified at this time.

#### 6.2.4 System Exceptions

None have been identified at this time.

### 6.3 **Phone Number (column)**

#### Behavior

This is an alphanumeric field. There are currently no validations to be performed on this field. (06/05/2001- To date, no European considerations have been noted (waiting on update to Use Case).

#### 6.3.1 Validation

None have been identified at this time.

#### 6.3.2 Business Exceptions

None have been identified at this time.

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### 6.3.3 *System Exceptions*

None have been identified at this time.

## 6.4 **Relationship (column)**

### 6.4.1 *Behavior*

This is an alphanumeric field.

### 6.4.2 *Validation*

No validation is necessary. The field is optional.

### 6.4.3 *Business Exceptions*

None have been identified at this time.

### 6.4.4 *System Exceptions*

None have been identified at this time.

## 7. **Authorized By**

### 7.1 **User ID**

#### 7.1.1 *Behavior*

This is an alphanumeric field and should conform to the standards for User ID.

#### 7.1.2 *Validation*

Must be a valid employee, authorized to the Rental Application.

#### 7.1.3 *Business Exceptions*

None have been identified at this time.

#### 7.1.4 *System Exceptions*

None have been identified at this time.

### 7.2 **Password**

#### 7.2.1 *Behavior*

This is an alphanumeric field and should conform to the standards for Passwords.

#### 7.2.2 *Validation*

Must be the employee's password.

#### 7.2.3 *Business Exceptions*

None have been identified at this time.

#### 7.2.4 *System Exceptions*

None have been identified at this time.

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## 8. Button Line Area

### 8.1 Back Button

#### 8.1.1 Behavior

The Back button will take the user to the main Driver screen for the currently selected Driver.

#### 8.1.2 Validation

None identified at this time.

#### 8.1.3 Business Exceptions

None identified at this time.

#### 8.1.4 System Exceptions

None identified at this time.

### 8.2 Complete button

#### 8.2.1 Behavior

The Complete button will initiate a save of the transaction. All validations will be performed, returning any errors to the user. If there are no errors, the transaction is saved, and the user is returned to the Reservation home page.

#### 8.2.2 Validation

None identified at this time.

#### 8.2.3 Business Exceptions

None identified at this time.

#### 8.2.4 System Exceptions

None identified at this time.

## 9. Note for OPEN (vs. Reservation)

Password and employee ID will be added at the bottom for authentication of the person authorizing the Cash Qualification.

## 10. Rules

### 10.1 Required Fields

There are no required fields .

### 10.2 Tabbing

Tabbing between fields should be in the following order: Current Employer:

Position:

How long at current job: years

Supervisor's Name:

Spoke to Whom:

How long at current job: months

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### 10.3 **Saving**

Because none of the information on the screen is required, the user can leave the screen at any time. The save is completed when the user saves the reservation or ticket.

## 11. **Security**

The user must have the appropriate security level to access this screen.

**<Company Name>**

## ECARS 2.0 - Driver Screen Action Specification

**THE** **NEW** **YORK** **PUBLIC** **LIBRARY**



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## Revision History

Date	Version	Description	Author
05/31/2001	1.0	Created Document	Mike Pallia
6/4/01	1.1	Revised Document	Johnny S. Johnston

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## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Driver screen.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Driver Screen

**Reservation: 411781**

**DRIVERS** **Drivers** "Have you rented with us before?"

**REFERRAL** Drivers Driver's License Detail Insurance Detail Cash Qualification

**RENTAL DATES** **Driver Name and Address**

**BILL-TO** Last Name  First Name

**SHOP** Address  Other Address

**RENTERS VEHICLE** ZIP  Country  ZIP Other  Country Other

**NOTES** City  State  City Other  State Other

**V**

**Other Info**

Primary Payment Method

CASH

Home Phone

Work Phone  Extension

Employer

Other Phone

Phone Type

Other

Figure 1 – Driver Screen

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### 3. Reservation Number

#### 3.1 Behavior

This area shows the unique reservation number that has been assigned to the newly created reservation. The reservation number is 6 alphanumeric characters long. If another reservation is open, its reservation number will be displayed in this area as well. The user will have the ability to have up to 3 reservations open at a time. A hyperlink will be available on the reservation numbers of the reservations that are NOT currently being displayed. For the reservation that is currently displayed, the reservation number will not have a hyperlink available. This is to allow the user to navigate between the open reservations.

#### 3.2 Validation

None identified at this time.

#### 3.3 Business Exceptions

If the user tries to open a 4<sup>th</sup> reservation, the system will display a message stating "A maximum of 3 reservations may be displayed".

#### 3.4 System Exceptions

None identified at this time.

### 4. Driver Navigation Area

#### 4.1 Behavior

This area gives the user the ability to move to any screen within the Driver area. Each screen within the Driver area is connected by a hyperlink. The screens that have been defined are: Driver, Driver's License Detail, Insurance Detail, and Cash Qualification. A hyperlink will NOT be available for the screen that is currently displayed.

#### 4.2 Validation

None identified at this time.

#### 4.3 Business Exceptions

None identified at this time.

#### 4.4 System Exceptions

None identified at this time.

### 5. Driver's First and Last Name

#### 5.1 Behavior

This area is divided into two fields.

- Last Name
- First Name.

Both fields are free form text fields and may contain alphanumeric values.

#### 5.2 Validation

None identified at this time.

#### 5.3 Business Exceptions

If the user attempts to exit the screen or complete the reservation, the last name field must have values entered. If there are not values in the last name field, the system will display a message "Last Name is required for a Reservation".

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#### **5.4 System Exceptions**

None identified at this time.

### **6. Address and Other Address Area**

#### **6.1 Behavior**

This area is broken into two free form text areas. The user has the ability to enter strings of alphanumeric values. The first area is called "Address" and the other area is called "Other Address".

#### **6.2 Validation**

None identified at this time.

#### **6.3 Business Exceptions**

None identified at this time.

#### **6.4 System Exceptions**

None identified at this time.

### **7. City, State, Zip Code and Country, and City Other, State Other, Zip Code Other and Country Other Areas**

#### **7.1 Behavior**

These behaviors are detailed out in the Geo-Framework Search Screen Spec

#### **7.2 Validation**

None identified at this time.

#### **7.3 Business Exceptions**

None identified at this time.

#### **7.4 System Exceptions**

None identified at this time.

### **8. Primary Payment Method Area**

#### **8.1 Behavior**

This area is a drop down box that allows the user to select a Primary Payment Method. The valid values that are available within the drop-down list are: Cash, Credit Card, Debit Card, and Check. Upon initial entry to the screen, the value in the drop down should be defaulted to "Credit Card". The user can change the value by selecting another value from the drop down list. There is no blank or "other" option available.

#### **8.2 Validation**

None identified at this time.

#### **8.3 Business Exceptions**

None identified at this time.

#### **8.4 System Exceptions**

None identified at this time.

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## 9. Home Phone Area

### 9.1 Behavior

The Home Phone area is a free form text area that will allow the user to input alphanumeric values.

### 9.2 Validation

None identified at this time.

### 9.3 Business Exceptions

None identified at this time.

### 9.4 System Exceptions

None identified at this time.

## 10. Work Phone Area

### 10.1 Behavior

The Work Phone area is a free form text area that will allow the user to input alphanumeric values.

### 10.2 Validation

None identified at this time.

### 10.3 Business Exceptions

None identified at this time.

### 10.4 System Exceptions

None identified at this time.

## 11. Phone Extension Area

### 11.1 Behavior

The Phone Extension area is a free form text area that will allow the user to input alphanumeric values. This area would not be enabled until there was a value entered into the Work Phone area.

### 11.2 Validation

There must be a value in the Work Phone area before this area is enabled.

### 11.3 Business Exceptions

None identified at this time.

### 11.4 System Exceptions

None identified at this time.

## 12. Employer Area

### 12.1 Behavior

The Employer area is a free form text area that will allow the user to input alphanumeric values.

### 12.2 Validation

None identified at this time.

### 12.3 Business Exceptions

None identified at this time.

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## 12.4 System Exceptions

None identified at this time.

## 13. Other Phone Area

### 13.1 Behavior

The Other Phone area is a free form text area that will allow the user to input alphanumeric values.

### 13.2 Validation

None identified at this time.

### 13.3 Business Exceptions

None identified at this time.

### 13.4 System Exceptions

None identified at this time.

## 14. Phone Type Area

### 14.1 Behavior

This area will be a drop down area that upon default will be a blank. When the user clicks the drop down area, the system will display the domain of Phone Types available.

### 14.2 Validation

If there is a value entered in the Other Phone area, then a type other than blank must be selected.

### 14.3 Business Exceptions

If values exist within the Other Phone area, the system will also verify that a value, other than blank, has been selected from the drop down area Phone Type. If one has not been selected, the system displays a message "Phone Type must be selected".

### 14.4 System Exceptions

None identified at this time.

## 15. Button Line Area

### 15.1 Behavior

The Search image/button will invoke the search process, submitting the form to the server.  
The Add Driver image/button will invoke the additional driver panel, submitting the form to the server.

### 15.2 Validation

None identified at this time.

### 15.3 Business Exceptions

None identified at this time.

### 15.4 System Exceptions

None identified at this time.

## 16. Rules

None identified at this time.



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## 17. Security

The user must have the appropriate security level to access this screen. The user is allowed to view or print anything. It is when they attempt to edit a reservation that their security restrictions will be enforced.

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## 1. System Generated Notes

### 1.1 How a note will be created and displayed

Based on the events that will be explained in the following table, this is how the system will save and display system notes

- When the user navigates from a screen (submits a page) either during creation or edit, the system will determine whether any notes need to be generated.
- The system will hold onto all the notes generated by the user until the user chooses to save or complete the reservation/ticket.
- After the user has saved or completed the reservation/ticket, the user can display the generated notes by either navigating to the notes area or re-opening the reservation/ticket and navigating to the notes area . (Note will be available in all sub-applications)

(NOTE: This document does not address ARMS messaging notes.)

#### 1.1.1 Technical Notes

- Design must support system notes having a type that can be queried for reporting purposes .
- No notes will be retrieved to the session until the user has navigated to the notes area .
- The word "changed" includes adding a value "null to something", changing a value "something to something different" or deleting a value "something to null" .
- Whenever a system generated note is created by a user, the system will store :
  - The name of the user that created the note
  - Date stamp when the event occurred
  - Time stamp when the event occurred

The system should store all system-generated notes in the local language that is used by that terminal's physical location .

#### 1.1.2 Question

1. Should the European notes be stored and displayed in the local language or English?  
Answer: All notes will be stored in the local language of the physical terminal being used.

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Event	Note Text	When to generate in Reservation	When to generate in Open	Use Case/Screen
A Reservation becomes an open ticket after the reservation has already been created.	"Ticket Opened"		Create	Open
A new ticket it is created	"Ticket Opened"		Create	Open
When a ticket is opened, the information in the preference field will be generated as a note	Any text within the preference field		Create	Open
When a ticket is opened, the text in the field, vehicle notes, will be generated as a note	Text in the field "Vehicle Notes"		Create	Open
A reservation is matched or unmatched to a Ticket	Reservation # "XXXXXXX" was (un) matched to Ticket # "XXXXXXX".		Create/Edit	Open
A reservation is created	"Reservation Created"	Create		Create
The user marks the ARMS Status Dialog Box as "Renter Has Been Contacted"	"Renter Has Been Contacted" AND any text entered in the ARMS Notes field	Edit		Navigation/ARMS Dialog Box
The user marks the ARMS Status Dialog Box as "Renter Has Not Been Contacted"	"Renter Has Been Contacted" AND any text entered in the ARMS Notes field	Edit		Navigation/ARMS Dialog Box
The Reservation Pick-up date is changed	Pick-up Date "XX/XX/XXXX" was changed to "XX/XX/XXXX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Dates
The Reservation Pick-up time is changed	Pick-up Time "XX: XX" was changed to "XX: XX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Dates
The Reservation pick-up method is changed	Pick-up Method "XX" was changed to "XX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Dates
The Reservation pick-up location is changed	Pick-up Location "XXXX" was changed to "XXXX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Dates
The Reservation Return date is changed	Return Date "XX/XX/XXXX" was changed to "XX/XX/XXXX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Dates
The Reservation Return time is changed	Return Time "XX: XX" was changed to "XX: XX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Dates
The Reservation return method is changed	Return Method "XX" was changed to "XX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Dates
The Rate Source and/or Account Number are changed	Rate Source "XXXXXX" was changed to "XXXXXX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Dates
The Rental Type is changed	Rental Type "XXXXX" was changed to "XXXXX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Dates
The Car Class is changed	Car Class "XXXXX" was changed to	Edit	Create (if selected in the	Rates/Dates

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Event	Note Text	When to generate in Reservation	When to generate in Open Reservation) /Edit	Use Case/Screen
	"XXXX"		Reservation) /Edit	
After a rate source and car class has been chosen, the user manually changes any of the values populated in the vehicle rate table.	What rate values were changed and what the old and new values are.	Create/Edit	Create/Edit	Rates/Dates
The Reservation return location is changed	Return Location "XXXX" was changed to "XXXXXX"	Edit	Create (if selected in the Reservation) /Edit	Pick-up Location
The Group or Branch of the Reservation pick-up location is changed	Pick-up Location "GPBR" was changed to "GPBR"	Edit	Create (if selected in the Reservation) /Edit	Pick-up Location
The Group or Branch of the Reservation return location is changed	Return Location "GPBR" was changed to "GPBR"	Edit	Create (if selected in the Reservation) /Edit	Pick-up Location
The system has populated the products area after a rate source has been chosen and the user manually changes any of the values.	What values were changed and what the old and new values are.	Create/Edit	Create/Edit	Products and Discounts
The user changes a tax or surcharge.	What values were changed and what the old and new values are.	Create/Edit	Create/Edit	Tax
The user changes the tax-exempt status.	Tax Exempt Status "XXXX" was changed to "XXXXX".	Create/Edit	Create/Edit	Tax/Driver
The user chooses to "Rent" when a renter comes up "Renter Warning"	"Renter Warning overridden"	Create/Edit	Create/Edit	Basic Res/Driver
The user chooses to bypass the warning when a driver's age is either over 70, 21-24 or 18-20 years of age.	"Underage/Overage warning overridden"	Create/Edit	Create/Edit	Basic Res/Driver
The User changes the Home phone number of the Renter.	Renter "Last Name, First name" Home Phone was changed from "XXXXX" to "XXXXXX".	Create (if populated by Driver search)/Edit	Create (if data exists from the reservation) /Edit	Basic Res/Driver
The User changes the Work phone number of the Renter.	Renter "Last name, First name" Work Phone was changed from "XXXXX" to "XXXXXX".	Create (if populated by Driver search)/Edit	Create (if data exists from the reservation) /Edit	Basic Res/Driver
The User changes the Other phone number of the Renter.	Renter "Last name, First Name" Other Phone was changed from "XXXXX" to "XXXXXX".	Create (if populated by Driver search)/Edit	Create (if data exists from the reservation) /Edit	Basic Res/Driver
The User changes any Additional Driver's Home phone number.	Additional Driver "Last Name, First Name" Home Phone was changed from "XXXXX" to "XXXXXX".	Create (if populated by Driver search)/Edit	Create (if data exists from the reservation) /Edit	Basic Res/Driver

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Event	Note Text	When to generate in Reservation	When to generate in Open	Use Case/Screen
The User changes any Additional Driver's Work phone number.	Additional Driver "Last Name, First Name" Work Phone was changed from "XXXX" to "XXXXX".	Create (if populated by Driver search)/Edit	Create (if data exists from the reservation) /Edit	Basic Res/Driver
The User changes any Additional Driver's Other phone number.	Additional Driver "Last Name, First Name" Other Phone was changed from "XXXX" to "XXXXX".	Create (if populated by Driver search)/Edit	Create (if data exists from the reservation) /Edit	Basic Res/Driver
The User changes any renter or additional driver's first or last name	What values were changed and what the old and new values are	Create/Edit	Create/Edit	Basic Res/Driver
The user adds or deletes an additional driver	Driver "Last Name, First Name" was removed (added)	Create/Edit	Create (if data exists from the reservation) /Edit	Basic Res/Driver
The user changes the Referral Account	Referral Account "XXXXXX" was changed to "XXXXXX"	Edit	Create (if data exists from the reservation) /Edit	Referral
The user changes the referral contact. (The referral account is the same)	Referral Contact "XXXX" was changed to "XXXXX" for Referral Account "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Referral
The user adds a "not on file" contact	Not on File Contact "First Name, Last Name" was added for Referral Account "XXXXX".	Create/Edit	Create/Edit	Referral
The user changes any bill-to account.	Bill-to "XXXX" was changed to "XXXXX".	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user adds or removes a bill-to account	Bill - to account "xxxxxx" was added/removed	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user changes the bill-to contact. (The Bill-to account is the same)	Bill-To Contact "XXXXXX" was changed to "XXXXX" for Bill-to account "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user adds a "not of file" bill-to contact.	Not on file contact "First Name Last Name" was added for Bill-to Account "XXXXX"	Create/Edit	Create/Edit	Bill-To
The user changes the authorized by contact. (The Bill-to account is the same)	Authorized By "XXXX" was changed to "XXXXX" for Bill-to Account "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user changes the auth status. (The Bill-to account is the same)	The Authorization Status was changed from "XXX" to "XXXXX" for Bill-to account "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user changes the auth %. (The Bill-to account is the same)	The Authorization % was changed from "XX" to "XX" for Bill-to Account	Edit	Create (if data exists from the reservation) /Edit	Bill-to

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Event	Note Text	When to generate in Reservation	When to generate in Open	Use Case/Screen
	"XXXX"			
The user changes the Max Per day. (The Bill-to account is the same)	The Maximum Amount Per Day was changed from "XX" to "XX" for Bill-to Account "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user changes the Max Billable Amount (The Bill-to account is the same)	The Maximum Billable Amount was changed from "XX" to "XX" for Bill-to Account "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user changes the number of days. (The Bill-to account is the same)	The number of days was changed from "XX" to "XX" for Bill-to Account "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user changes either the Billing start date or billing start time (The Bill-to account is the same)	The Billing Start Date and Billing Start Time changed from "XXXXXXXX" to "XXXXXXXX" for Bill-to Account "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user changes either the Billing end date or billing end time. (The Bill-to account is the same)	The Billing End Date and Billing End Time changed from "XXXXXXXX" to "XXXXXXXX" for Bill-to account "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user changes the daily rate. (The Bill-to account is the same)	The Daily Rate was changed from "XXXX" to "XXXX" for Bill-to account "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user changes the Authorized Car Class. (The Bill-to is the same)	The Authorized Car Class was changed from "XXXX" to "XXXX" for Bill-to account "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user changes the authorization to include or not include tax (The Bill-to account is the same)	The authorization was changed to (not) include tax.	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user changes a product or service (The Bill-to is the same)	What Products were added or deleted and the amounts they were changed from and to.	Create/Edit	Create/Edit	Bill-to
The user adds a Not on File Bill-to	Not on File Account "XXXX" has been added as a Bill-to	Create/Edit	Create/Edit	Bill-to
The user changes the Ro/Po/Cl #. (The Bill-to is the same)	The Claim/ Pol/ PO/ RO# was changed from "XXXX" to "XXXX" for Bill-to account "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to

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Event	Note Text	When to generate in Reservation	When to generate in Open	Use Case/Screen
The user changes the Claim type. (The Bill-to is the same)	The Claim Type was changed from "XXXX" to "XXXX" for Bill-to account "XXXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user changes the insured's name.	The Insured's Name was changed from "XXXXXX" to "XXXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user adds a "Not on File" Shop contact.	Not on file contact "First Name Last Name" was added for Account "XXXXXX"	Create/Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
The user changes the shop account.	Shop "XXXXX" was changed to "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
The user changes the type of loss.	Type of loss "XXXXX" was changed to "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
The user changes the "Total Loss?".	Total Loss "XXXXX" was changed to "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
The user changes the date of loss.	Date of loss "XXXXXX" was changed to "XXXXXX"	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
The user changes number of theft waiver days.	Theft waiver days "X" was changed to "X"	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
The user changes the renter's vehicle Year.	"The renter's vehicle Year "XXXX" was changed to Year "XXXX"	Edit	Edit	Vehicle/Shop
The user changes the renter's vehicle Make.	"The renter's vehicle Make "XXXX" was changed to Make "XXXX"			
The user changes the renter's vehicle Model.	"The renter's vehicle Year "Model" was changed to Model "XXXX"			
The user changes the renter's vehicle Other Make text.	The renter's vehicle other Make "XXXX" was changed to "XXXX"	Edit	Edit	Vehicle/Shop
The user changes the renter's vehicle Other Model text.	The renter's vehicle other Model "XXXX" was changed to "XXXX"	Edit	Edit	Vehicle/Shop
The user changes the registration number of the renter's vehicle. (If the physical terminal location is in Europe.)	The renter's vehicle registration number "XXXX" was changed to "XXXX"	Edit	Edit	Vehicle/Shop
The user changes the class of the renter's vehicle. (If the physical terminal location is in Germany.)	The renter's vehicle class "X" was change to "X"	Edit	Edit	Vehicle/Shop
If the user voids a ticket	"Reservation was voided"	Edit	Edit	

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**Project:**  
Reservation

**Phase:**  
Elaboration

**Iteration:**  
1

## ECARS 2.0 Screen Action Specification: Transfer Reservation

Version 1.5

**Artifact:**  
Development Case

**Page:**  
1 of 13

**Last saved:**  
11/30/01 10:16 AM

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Y:\GROUPS\E-Commerce Group\Patent Materials 8\_31\_01\Copy of All Patents\ECARS20 - Reservation\Supplemental Specs\Transfer  
Reservation Screen Action Spec.DOC

<b>Reservations</b>	Version: 1.4
Screen Action Specification	Date: 12/21/01
Transfer Reservation	

## Revision History

Date	Version	Description	Author
August 28, 2001	1.0	Creation	Leanne Bevelhimer
September 17, 2001	1.1	Updated cancel button specifications	Leanne Bevelhimer
October 2, 2001	1.2	Updated based on technical constraints of pop-up windows	Leanne Bevelhimer
October 3, 2001	1.3	Added screen shot of Reservation Pilot version.	James Atteberry
November 1, 2001	1.4	Updated based on it being a full screen	Leanne Bevelhimer
November 9, 2001	1.5	Updated screen shots	Leanne Waugh

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## Screen Action Specification

### 1. Introduction

This document describes the behavioral characteristics associated with the Transfer Reservation screen, and its related screens.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Screen Shots

**Transfer Reservation**

**Pickup Information**

Pickup Date: Thursday November 08, 2001  
Pickup Time: 02:30 PM  
Group: 01 - ST LOUIS  
Branch: LADUE RENTAL 0101  
\*\* Changing the Pickup Branch may change the rental rate \*\*

**Return Information**

Return Date: Wednesday November 28, 2001  
Return Time: 03:45 PM  
Group: 01 - ST LOUIS  
Branch: O FALLON ILLINOIS 0129

**Address**

**Pickup Address:** 8844 LADUE ROAD LADUE, MO 63124-2087  
**Phone Number:** (314) 863-6886

**Return Address:** 1603 WEST HIGHWAY 50 O'FALLON, IL 62269-1622  
**Phone Number:** (618) 632-7200

**Hours Of Operation**

Day	Pickup Hours	Return Hours
Monday	7:30 AM - 6:00 PM	7:30 AM - 6:00 PM
Tuesday	7:30 AM - 6:00 PM	7:30 AM - 6:00 PM
Wednesday	7:30 AM - 6:00 PM	7:30 AM - 6:00 PM
Thursday	7:30 AM - 6:00 PM	7:30 AM - 6:00 PM
Friday	7:30 AM - 6:00 PM	7:30 AM - 6:00 PM
Saturday	8:00 AM - 3:00 PM	8:00 AM - 12:00 AM
Sunday	Closed	Closed

**Notes**

Notes Taken : 1

Res -137752 Res -137768 Res -975254

Figure 1: Transfer Reservation (Reservation Pilot Version)

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Figure 2: Dates and Rates (with Pick-Up and Return Group/Branch Information)

### 3. Field Descriptions

#### 3.1 Transfer Reservation Main Page

##### 3.1.1 Pick-Up Date

###### 3.1.1.1 Behavior

This field is a read-only text field that displays the date of the reservation pick-up. The format of the date is such that the user is aware of the day of the week that the pick-up is to occur, for example, Tuesday, August 28, 2001. The actual format of the date is specific to the location of the branch.

If a pick-up date is not entered in the reservation, this field will be blank.

###### 3.1.1.2 Validation

None identified at this time.

###### 3.1.1.3 Business Exceptions

None identified at this time.

###### 3.1.1.4 System Exceptions

None identified at this time.

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### 3.1.2 Pick-Up Time

#### 3.1.2.1 Behavior

This field is a read-only text field that displays the reservation pick-up time. The format of the time is specific to the location that the branch is in. For 12-hour locales, it is HH:MM A and for 24-hour locales, it is HH:MM.

If a pick-up time is not entered in the reservation, this field will be blank.

#### 3.1.2.2 Validation

None identified at this time.

#### 3.1.2.3 Business Exceptions

None identified at this time.

#### 3.1.2.4 System Exceptions

None identified at this time.

### 3.1.3 Return Date

#### 3.1.3.1 Behavior

This field is a read-only text field that displays the return date. The date is displayed in a format so that the user is aware of the day of the week that the pick-up is to occur, for example, Tuesday, August 28, 2001. The actual format of the date is specific to the location of the branch.

If a return date is not entered in the reservation, this field will be blank.

#### 3.1.3.2 Validation

None identified at this time.

#### 3.1.3.3 Business Exceptions

None identified at this time.

#### 3.1.3.4 System Exceptions

None identified at this time.

### 3.1.4 Return Time

#### 3.1.4.1 Behavior

This field is a read-only text field that displays the reservation return time. The format of the time is specific to the location that the branch is in. For 12-hour locales, it is HH:MM A and for 24-hour locales, it is HH:MM.

If a return time is not entered in the reservation, this field will be blank.

#### 3.1.4.2 Validation

None identified at this time.

#### 3.1.4.3 Business Exceptions

None identified at this time.

#### 3.1.4.4 System Exceptions

None identified at this time.

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### 3.1.5 Pick-Up Group

#### 3.1.5.1 Behavior

This field area is a drop down box, limited to those groups that exist at the point in time that the screen is opened. The user will be able to type a character, alpha or numeric, into the area and have the drop down list position to the character. For example, if the user types an 'H' the drop down list would position to the first string beginning with 'H'. The default item will be the group associated to the terminal locale or the currently saved pick-up group.

#### 3.1.5.2 Validation

The items appearing in the list are static; the user cannot add items to the list dynamically. For the purposes of Pilot Reservation, the group drop-down box will be disabled. For full release, the field will be enabled based on security roles. When the Transfer Reservation screen is initially opened on a new reservation, the pick-up group field will default to the terminal's group. When the Transfer Reservation screen is initially opened for a previously saved reservation, the pick-up group field will default to the location that was saved with the reservation.

#### 3.1.5.3 Business Exceptions

None identified at this time.

#### 3.1.5.4 System Exceptions

None identified at this time.

### 3.1.6 Pick-Up Branch

#### 3.1.6.1 Behavior

This field area is a drop down box, limited to those rental branches that exist at the point in time that the screen is opened in the group that is selected in the Pick-Up Group field. The user will be able to type a character, alpha or numeric, into the area and have the drop down list position to the character. For example, if the user types an 'H' the drop down list would position to the first string beginning with 'H'. The default item will be the branch associated to the terminal locale or the currently saved pick-up branch.

#### 3.1.6.2 Validation

The items appearing in the list are static; the user cannot add items to the list dynamically. When the Transfer Reservation screen is initially opened on a new reservation, the pick-up branch field will default to the terminal's group. When the Transfer Reservation screen is initially opened for a previously saved reservation, the pick-up branch field will default to the location that was saved with the reservation.

#### 3.1.6.3 Business Exceptions

None identified at this time.

#### 3.1.6.4 System Exceptions

None identified at this time.

### 3.1.7 Return Group

#### 3.1.7.1 Behavior

This field area is a drop down box, limited to those groups that exist at the point in time that the screen is opened. The user will be able to type a character, alpha or numeric, into the area and have the drop down list position to the character. For example, if the user types an 'H' the drop down list would position to the first string beginning with 'H'. The default item will be the group associated to the terminal locale or the currently saved return group.

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### 3.1.7.2 Validation

The items appearing in the list are static; the user cannot add items to the list dynamically. For the purposes of Pilot Reservation, the group drop-down box will be disabled. For full release, the field will be enabled based on security roles. When the Transfer Reservation screen is initially opened on a new reservation, the pick-up group field will default to the terminal's group. When the Transfer Reservation screen is initially opened for a previously saved reservation, the return group field will default to the location that was saved with the reservation.

### 3.1.7.3 Business Exceptions

None identified at this time.

### 3.1.7.4 System Exceptions

None identified at this time.

## 3.1.8 Return Branch

### 3.1.8.1 Behavior

This field area is a drop down box, limited to those rental branches that exist at the point in time that the screen is opened in the group that is selected in the Return Group field. The user will be able to type a character, alpha or numeric, into the area and have the drop down list position to the character. For example, if the user types an 'H' the drop down list would position to the first string beginning with 'H'. The default item will be the branch associated to the terminal locale or the currently saved pick-up branch.

When the user selects a new Pick-Up Branch, the Return Branch field automatically changes to the same branch.

### 3.1.8.2 Validation

The items appearing in the list are static; the user cannot add items to the list dynamically. When the Transfer Reservation screen is initially opened on a new reservation, the pick-up branch field will default to the terminal's group. When the Transfer Reservation screen is initially opened for a previously saved reservation, the return branch field will default to the location that was saved with the reservation.

### 3.1.8.3 Business Exceptions

None identified at this time.

### 3.1.8.4 System Exceptions

None identified at this time.

## 3.1.9 Rental Rates Note

### 3.1.9.1 Behavior

This field is a read-only label that displays an alert to the user. It always appears on the screen to notify the user that changing the pick-up location may change the quoted rental rates.

### 3.1.9.2 Validation

None identified at this time.

### 3.1.9.3 Business Exceptions

None identified at this time.

### 3.1.9.4 System Exceptions

None identified at this time.



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### 3.1.10 Pick-Up Branch Availability Note

#### 3.1.10.1 Behavior

This field is a read-only label that notifies the user if the selected pick-up branch is not open. It is displayed above the selected branch address, if applicable.

If the user selects a pick-up branch that is not open for the entered pick-up time then, a note will appear in red text that states, "The pick-up location is closed during selected hours".

If the pick-up date and time are not entered, then the message will not appear. If the pick-up date is entered without the time, the message will only appear if the branch is closed for the entire selected day.

#### 3.1.10.2 Validation

None identified at this time.

#### 3.1.10.3 Business Exceptions

None identified at this time.

#### 3.1.10.4 System Exceptions

None identified at this time.

### 3.1.11 Return Branch Availability Note

#### 3.1.11.1 Behavior

This field is a read-only label that notifies the user if the selected return branch is not open. It is displayed above the selected branch address, if applicable.

If the user selects a return branch that is not open for the entered return time then, a note will appear in red text that states "The return location is closed during selected hours".

If the return date and time are not entered, then the message will not appear. If the return date is entered without the time, the message will only appear if the branch is closed for the entire selected day.

#### 3.1.11.2 Validation

None identified at this time.

#### 3.1.11.3 Business Exceptions

None identified at this time.

#### 3.1.11.4 System Exceptions

None identified at this time.

### 3.1.12 Pick-Up Branch Address

#### 3.1.12.1 Behavior

The Pick-Up Branch address is a read-only label that is based upon the Pick-Up Group/Branch combination that is selected. It is not visible when the screen is first opened. When the user selects a new Pick-Up Branch, this field will automatically update with the selected Pick-Up Branch's address.

#### 3.1.12.2 Validation

None identified at this time.

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### 3.1.12.3 Business Exceptions

None identified at this time.

### 3.1.12.4 System Exceptions

None identified at this time.

## 3.1.13 Pick-Up Branch Phone Number

### 3.1.13.1 Behavior

The Pick-Up Branch phone number is a read-only label that is based upon the Pick-Up Group/Branch combination that is selected. It is not visible when the screen is first opened. When the user selects a new Pick-Up Branch, this field will automatically update with the selected Pick-Up Branch's phone number.

### 3.1.13.2 Validation

None identified at this time.

### 3.1.13.3 Business Exceptions

None identified at this time.

### 3.1.13.4 System Exceptions

None identified at this time.

## 3.1.14 Pick-Up Branch Hours of Operation

### 3.1.14.1 Behavior

The Pick-Up Branch hours of operation field is a read-only label that is based upon the Pick-Up Group/Branch combination that is selected. It is not visible when the screen is first opened. When the user selects a new Pick-Up Branch, this field will automatically update with the selected Pick-Up Branch's hours of operation. The hours of operation are displayed in the time local to the selected branch.

### 3.1.14.2 Validation

None identified at this time.

### 3.1.14.3 Business Exceptions

None identified at this time.

### 3.1.14.4 System Exceptions

None identified at this time.

## 3.1.15 Return Branch Address

### 3.1.15.1 Behavior

The Return Branch address is a read-only label that is based upon the Return Group/Branch combination that is selected. It is not visible when the screen is first opened. When the user selects a new Return Branch or the Return Branch is changed, this field will automatically update with the selected Return Branch's address.

### 3.1.15.2 Validation

None identified at this time.

### 3.1.15.3 Business Exceptions

None identified at this time.

### 3.1.15.4 System Exceptions

None identified at this time.

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### 3.1.16 Return Branch Phone Number

#### 3.1.16.1 Behavior

The Return Branch phone number is a read-only label that is based upon the Return Group/Branch combination that is selected. It is not visible when the screen is first opened. When the user selects a new Return Branch or the Return Branch is changed, this field will automatically update with the selected Return Branch's phone number.

#### 3.1.16.2 Validation

None identified at this time.

#### 3.1.16.3 Business Exceptions

None identified at this time.

#### 3.1.16.4 System Exceptions

None identified at this time.

### 3.1.17 Return Branch Hours of Operation

#### 3.1.17.1 Behavior

The Return Branch hours of operation field is a read-only label that is based upon the Return Group/Branch combination that is selected. When the user selects a new Return Branch or the Return Branch is changed, this field will automatically update with the selected Return Branch's hours of operation. The hours of operation are displayed in the time local to the selected branch.

#### 3.1.17.2 Validation

None identified at this time.

#### 3.1.17.3 Business Exceptions

None identified at this time.

#### 3.1.17.4 System Exceptions

None identified at this time.

### 3.1.18 OK Button

#### 3.1.18.1 Behavior

When the user presses the 'OK' button, the system stores the data on the screen, creates a system generated note and returns the user to the main screen of the navigation area that the user was in before navigating to Transfer Reservation Screen.

#### 3.1.18.2 Validation

None identified at this time.

#### 3.1.18.3 Business Exceptions

None identified at this time.

#### 3.1.18.4 System Exceptions

None identified at this time.

### 3.1.19 Cancel Button

#### 3.1.19.1 Behavior

When the user clicks the 'Cancel' button, the system does not store the data and returns the user to the main screen

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of the navigation area that the user was in before navigating to the Transfer Reservation Screen..

### 3.1.19.2 Validation

None identified at this time.

### 3.1.19.3 Business Exceptions

None identified at this time.

### 3.1.19.4 System Exceptions

None identified at this time.

## 3.2 Dates and Rates Screen

### 3.2.1 Pick-Up Group/Branch

#### 3.2.1.1 Behavior

This is a read-only text field that displays the current pick-up group/branch numbers. For a new reservation, it will display the group/branch information for the terminal location. For an existing reservation, it will display the group/branch information that is stored with the reservation. After the user saves information on the Transfer Reservation page and closes the Transfer Reservation screen, this field will update with the new information.

#### 3.2.1.2 Validation

None identified at this time.

#### 3.2.1.3 Business Exceptions

None identified at this time.

#### 3.2.1.4 System Exceptions

None identified at this time.

### 3.2.2 Return Group/Branch

#### 3.2.2.1 Behavior

This is a read-only text field that displays the current return group/branch numbers. For a new reservation, it will display the group/branch information for the terminal location. For an existing reservation, it will display the group/branch information that is stored with the reservation. After the user saves information on the Transfer Reservation page and closes the Transfer Reservation screen, this field will update with the new information.

#### 3.2.2.2 Validation

None identified at this time.

#### 3.2.2.3 Business Exceptions

None identified at this time.

#### 3.2.2.4 System Exceptions

None identified at this time.

## 4. Rules

- A System Generated Note is generated every time a location is changed and the reservation is completed. The system generated note is not saved to the reservation until the reservation has been completed.
- Transfer Reservation data is only saved to the reservation if all the changes to the reservations are saved.
- The user has the option to transfer any reservation in his/her group.
- The option to transfer a reservation is found in the 'Options' drop down list from within a reservation.
- This screen will not be available for NatRes Reservations.

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- When a pick-up/return location is changed to a location in a different time zone, the reservation time changes so that it is the same in the new time zone. The database value (GMT) will be changed, but the value displayed to the user will be the same. Example: A person has a reservation at 4:00 PM (CST) in St. Louis and it is transferred to New York, the reservation will now be at 4:00 PM (EST).
- When the pick-up branch is changed and the reservation is completed, the reservation will print at the new pick-up location.
- The Transfer Reservation Screen is a full screen window. It will behave like other full screens in the application.
- When the user navigates away from the window via the left hand navigation bar, the system will not store any changes that the user made on the Transfer Reservation screen.

## 5. Security

- The security for Transfer Reservation is based upon the Reservation security model. If the user has permissions to edit a reservation, he/she will be able to transfer it. In general, all users in a group can modify all reservations for that group.

## 6. Questions

- If a user transfers a reservation to another time zone, what will happen to the pick-up/return time? For example, if a person has a reservation at 4:00 PM in St. Louis and it is transferred to New York, what time will the reservation be for (4:00 or 5:00)? *The pick-up/return time will be the same.*
- Should everyone in a given branch have permissions to change the location for every other branch in that group? *Yes*

20 Open Ticket

Edit View Help				
Supp Specs				
File Edit View Help				
	Name	Size	Type	Modified
301	Insurance Detail	161KB	Microsoft Word Document	12/20/01 12:48 PM
302	Notes	162KB	Microsoft Word Document	12/20/01 12:52 PM
303	Open Ticket Search	203KB	Microsoft Word Document	12/20/01 12:41 PM
304	Open Ticket without Payment	92KB	Microsoft Word Document	12/20/01 12:43 PM
305	Retrieve Rates with Perot Rate Engine	442KB	Microsoft Word Document	12/20/01 12:37 PM
306	Vehicle Shop	380KB	Microsoft Word Document	12/20/01 12:39 PM
307	Bill-To SUP	579KB	SUP File	10/26/01 7:39 AM
308	Cash Qualification SUP	221KB	SUP File	9/5/01 2:05 PM
8 object(s)		2.18MB		

JC398 U.S. PTO  
10/028073  
12/26/01

0(s) selected

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## Enterprise Rent-A-Car

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### ECARS 2.0 - Insurance Detail Information Screen Action Specification

Enterprise Rent-A-Car  
ECARS 2.0 - Insurance Detail Information  
Screen Action Specification



Version: <1.0>	
ECARS 2	Date: <dd/mmm/yy>
<document identifier>	

## Revision History

Date	Version	Description	Author
04/12/2001	0.0	Created Template	Marty Tichy
04/16/2001	1.0	Created document	Maribeth Concannon
06/18/2001	1.1	Updated screen shots	Marty Tichy
07/18/2001	1.1	Updated validation of expiration date. Removed "The field is optional."	Maribeth Concannon
09/06/2001	1.2	Updated with changes from Navigation use case. Updated screen shot and button line.	James Atteberry



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ECARS 2	Date: <dd/mm/yy>
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## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Insurance Details screen.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Screen Print

**Insurance Detail - Microsoft Internet Explorer provided by Enterprise Rent-a-Car**

Reserve Vehicle | Contracts | Call Back

**DRIVERS**  
James Atteberry  
Additional Drivers: 2

**REFERRAL**  
Account Name  
Contact Name

**DATES/RATES**  
08/27/2001; ECAR  
Daily Rate; ASD

**BILL-TO**  
Account Name  
Contact Name

**VEHICLE/SHOP**  
1997 Dodge Avenger  
Shop Account Name

**NOTES**  
Notes Taken: 1  
Changed: 08/27/2001

**Drivers - Insurance Detail** - Options -

Atteberry, James | Smith, Chris | Cloud, Kevin

Driver | Other Address | Insurance Detail | Cash Qualification

**Insurance Details**

Carrier | Agent | Phone

Insurance Company Contact | Policy Number | Expiration Date (MM/DD/YYYY)

Comprehensive Deductible | Collision Deductible | Liability?

Assigned Risk? | Lienholder Policy?

Back | Complete

Res - 411781 | Tkt - 234567 | Cbk - 363221

Figure 1 - Insurance Detail

-1 mon			July 2001				+1 mon	
Sun	Mon	Tue	Wed	Thu	Fri	Sat		
<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>		
<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>		
<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>		
<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>		
<u>29</u>	<u>30</u>	<u>31</u>						

Figure 2 - Date selection

	Version: <1.0>
ECARS 2	Date: <dd/mmm/yy>
<document identifier>	

### 3. **Insurance Details**

#### 3.1 **Carrier**

##### 3.1.1 **Behavior**

This is an alphanumeric field .

##### 3.1.2 **Validation**

No validation is necessary. See Rules regarding when the field is required.

##### 3.1.3 **Business Exceptions**

None have been identified at this time.

##### 3.1.4 **System Exceptions**

None have been identified at this time.

#### 3.2 **Agent**

##### 3.2.1 **Behavior**

This is an alphanumeric field.

##### 3.2.2 **Validation**

No validation is necessary. The field is optional.

##### 3.2.3 **Business Exceptions**

None have been identified at this time.

##### 3.2.4 **System Exceptions**

None have been identified at this time.

#### 3.3 **Phone**

##### 3.3.1 **Behavior**

This is an alphanumeric field. It should comply with the standard phone number field formatting. (06/05/2001- To date, no European considerations have been noted (waiting on update to Use Case).

##### 3.3.2 **Validation**

The field is optional.

It should be edited to comply with the locale's format (i.e. in the United States, the length is 10 digits and include delimiters after the 3<sup>rd</sup> and 6<sup>th</sup> characters. If no delimiters are used, but 10 digits are entered, that is also valid.)

##### 3.3.3 **Business Exceptions**

None have been identified at this time.

##### 3.3.4 **System Exceptions**

None have been identified at this time.

#### 3.4 **Insurance Company Contact**

##### 3.4.1 **Behavior**

This is an alphanumeric field.

##### 3.4.2 **Validation**

No validation is necessary. See Rules regarding when the field is required.

	Version: <1.0>
ECARS 2	Date: <dd/mmm/yy>
<document identifier>	

### 3.4.3 *Business Exceptions*

None have been identified at this time.

### 3.4.4 *System Exceptions*

None have been identified at this time.

## 3.5 **Policy Number**

### 3.5.1 *Behavior*

This is an alphanumeric field.

### 3.5.2 *Validation*

No validation is necessary. See Rules regarding when the field is required.

### 3.5.3 *Business Exceptions*

None have been identified at this time.

### 3.5.4 *System Exceptions*

None have been identified at this time.

## 3.6 **Expiration Date**

### 3.6.1 *Behavior*

Only numeric values and delineating characters will be accepted into this area.

Associated with this field is a calendar function that allows the user to select a date from a calendar screen instead of entering a value. Clicking on the calendar icon will display the screen; once a date is selected from the screen the **Expiration Date** field will be populated with the appropriate date.

See Rules regarding when the field is required.

### 3.6.2 *Validation*

The date should be the current date or a date in the future.

### 3.6.3 *Business Exceptions*

None have been identified at this time.

### 3.6.4 *System Exceptions*

None have been identified at this time.

## 3.7 **Comprehensive Deductible**

### 3.7.1 *Behavior*

This is a numeric field.

### 3.7.2 *Validation*

No validation is necessary. See Rules regarding when the field is required.

### 3.7.3 *Business Exceptions*

None have been identified at this time.

### 3.7.4 *System Exceptions*

None have been identified at this time.

## 3.8 **Collision Deductible**

### 3.8.1 *Behavior*

This is a numeric field.

	Version: <1.0>
ECARS 2	Date: <dd/mmm/yy>
<document identifier>	

### 3.8.2 Validation

No validation is necessary. See Rules regarding when the field is required.

### 3.8.3 Business Exceptions

None have been identified at this time.

### 3.8.4 System Exceptions

None have been identified at this time.

## 3.9 Liability?

### 3.9.1 Behavior

The response is either 'Yes' or 'No', but the response is optional. There is no default value.

### 3.9.2 Validation

No validation is necessary. See Rules regarding when the field is required.

### 3.9.3 Business Exceptions

None have been identified at this time.

### 3.9.4 System Exceptions

None have been identified at this time.

## 3.10 Assigned Risk?

### 3.10.1 Behavior

The response is either 'Yes' or 'No', but the response is optional. There is no default value.

### 3.10.2 Validation

No validation is necessary. The field is optional.

### 3.10.3 Business Exceptions

None have been identified at this time.

### 3.10.4 System Exceptions

None have been identified at this time.

## 3.11 Lienholder Policy?

### 3.11.1 Behavior

The response is either 'Yes' or 'No', but the response is optional. There is no default value.

### 3.11.2 Validation

No validation is necessary. The field is optional.

### 3.11.3 Business Exceptions

None have been identified at this time.

### 3.11.4 System Exceptions

None have been identified at this time.

## 4. Button Line Area

### 4.1 Back button

#### 4.1.1 Behavior

The Back button will take the user to the main Driver screen for the currently selected driver.

Version: <1.0>	
ECARS 2	Date: <dd/mmm/yy>
<document identifier>	

#### 4.1.2 Validation

No validation is necessary.

#### 4.1.3 Business Exceptions

None have been identified at this time.

#### 4.1.4 System Exceptions

None have been identified at this time.

### 4.2 Complete button

#### 4.2.1 Behavior

The Complete button will initiate a save of the transaction. All validations will be performed, returning any errors to the user. If there are no errors, the transaction is saved, and the user is returned to the Reservation home page.

#### 4.2.2 Validation

No validation is necessary.

#### 4.2.3 Business Exceptions

None have been identified at this time.

#### 4.2.4 System Exceptions

None have been identified at this time.

## 5. Rules

### 5.1 Required Fields

These fields are only required if information is present in any one of the following fields: Carrier, Policy Number, Expiration Date, Collision Deductible, Comprehensive Deductible, Liability, Insurance Company Contact. If the system determines that any of the listed fields are missing information, the system will present the user with a feedback message listing the incomplete required fields and directing them to complete them.

### 5.2 Saving

Because none of the information on the screen is required, the user can leave the screen at any time during the course of making or editing the reservation or while opening, editing or closing the open ticket Unless any of the fields in SUPL 76 are present.. The save is completed when the user saves the reservation or ticket.

### 5.3 Tabbing

Tabbing between fields should be in the order that they are in this document.

## 6. Security

The user must have the appropriate security level to access this screen.

---

# Enterprise Rent-A-Car

---

## Do yECARS 2.0 - Notes Information Screen Action Specification



Do yECARS 2	Date 12/21/01
-------------	---------------

## Revision History

Date	Version	Description	Author
07/09/2001	1.0	Created document	Marty Tichy
08/17/2001	1.1	Changes instances of 'Contract' to 'Reservation/Ticket' per Jayne Derby's logged defect.	Chris Carr
09/06/2001	1.2	Updated to reflect changes from Navigation use case.	James Atteberry
11/06/2001	1.3	Updated with new screen shot and removed the "Print Current Page" requirement.	Chris Carr
11/09/2001	1.4	Described German translation difference for 'ARMS Msg' column heading.	Chris Carr
11/20/2001	1.5	Notes text field in summary list is limited at 80, not 90, characters. Anything after that is represented by an ellipse (...).	Chris Carr

Do yECARS 2	Date 12/21/01
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## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Notes screen.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Screen Print

Notes - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Reservation Contracts Callbacks

DRIVERS Notes - Options - Go

Driver summary 1  
Driver summary 2

REFERRAL

Referral sum 1  
Referral sum 2

DATES/RATES

Dates summary 1  
Dates summary 2

BILL-TO

Bill-To summary 1  
Bill-To summary 2

VEHICLE/SHOP

Vehicle/Shop 1  
Vehicle/Shop 2

NOTES

Notes summary 1  
Notes summary 2

Type: ALL Status: ALL

Date/Time	Note	Status	Note Type	Created By	ARMS Msg
07/03/2001 3:22PM	Car is at Joe's Garage	CLOSE	CALLBACK	ECARS 2.0 USER	
07/02/2001 2:22PM	Does not like red cars. This shows the first two lines of the notes section.(2 @ 45 char)...	OPEN	SYSTEM	SYSTEM	SENT
07/01/2001 1:22PM	Reservation Created	RESERVATION	SYSTEM	SYSTEM	SENT

Print All Records Add Note

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

keycode=9 Local intranet

Notes screen

Figure 1 – Notes

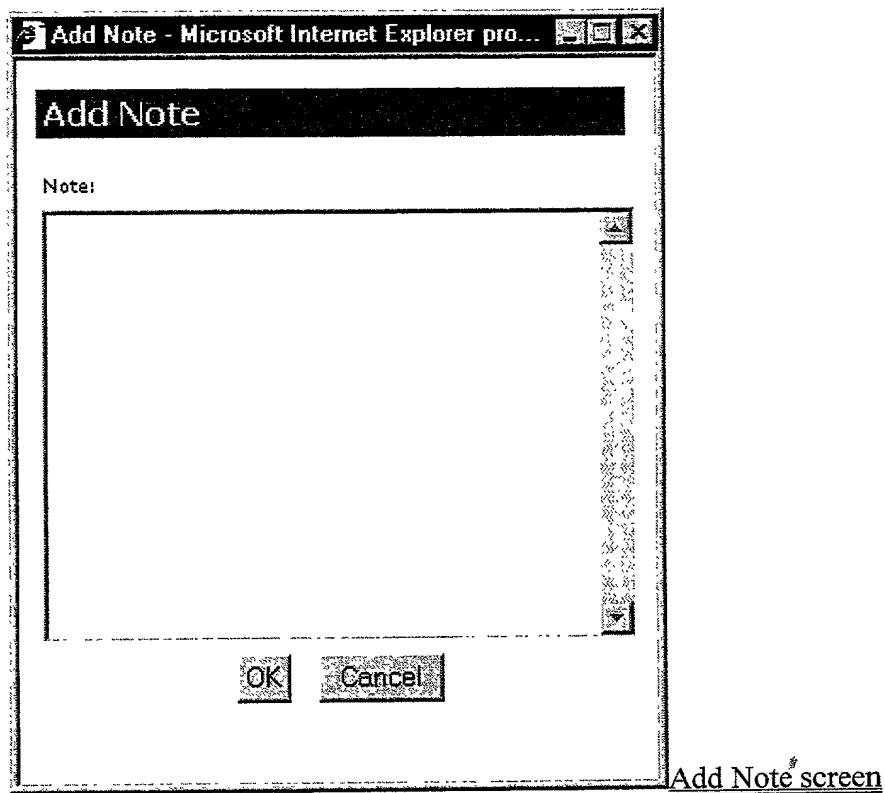


Figure 2 – Add Note

Do yECARS 2	Date 12/21/01
-------------	---------------

**View Note - Microsoft Internet Explorer provided by Enterprise Rent-a-Car**

**View Note**

Date: 7/02/2001 2:22PM  
Status: Open  
Type: System  
Created By: System  
Arms Msg: Sent  
Note:

Does not like red cars. This shows the first two lines of the notes section. (2 @ 45 char)

The text area shown here is big enough to show the entire database field without scrolling.

View

Note screen

**Figure 3 – View Note**

Notes List - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Address Y:\APPS\Ecars\_20\Development Projects\HTML\Open Ticket\Notes\NotesList.html

## Notes List

Reservation: 411781  
 Renter: Joe Smith  
 Date: 07/09/2001

Date/Time	Note	Status	Note Type	Created By	ARMS Msg
07/01/2001 1:22PM	Reservation Created	Res	System	System	Sent
07/02/2001 2:22PM	Does not like red cars. This shows the first two lines of the notes section.(2 @ 45 char)	Open	System	System	Sent
07/03/2001 3:22PM	Car is at Joe's Garage	Close	Callback	ECARS 2.0 User	

Records Found: 3

Done Local intranet

[Print All Notes report look](#)

**Figure 4 – Print All Records**

### 3. Notes (Figure 1 – Notes)

#### 3.1 Type

##### 3.1.1 Behavior

This is a drop down field containing the following domain values:

- All
- Callback
- System

The default value is "All". The summary list is filtered by the item selected from the values list. The Status drop down list should be taken into consideration when filtering the summary list.

##### 3.1.2 Validation

No validation is necessary.

##### 3.1.3 Business Exceptions

None have been identified at this time.

##### 3.1.4 System Exceptions

None have been identified at this time.

Do yECARS 2	Date 12/21/01
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### 3.2 Status

#### 3.2.1 Behavior

This is a drop down field containing the following domain values:

- All
- Reservation
- Open
- Close

The default value is "All". The summary list is filtered by the item selected from the values list. The Type drop down list should be taken into consideration when filtering the summary list.

#### 3.2.2 Validation

No validation is necessary.

#### 3.2.3 Business Exceptions

None have been identified at this time.

#### 3.2.4 System Exceptions

None have been identified at this time.

### 3.3 Summary List

#### 3.3.1 Behavior

The result list, as describe in the use case, will have a static column display sequence. All columns need to have the capability to be sorted, ascending and descending. The user selects a Reservation/Ticket by clicking on the hyperlink associated with the desired data row. The summary list will be populated with the latest note appearing first and the earliest note appearing last (descending order sorted by date/time).

An ellipse (...) should be placed at the end of the note text field if the verbiage contained in the note exceeds 80 characters.

The user must have the appropriate security to view/edit the Reservation/Ticket selected.

This list contains the application standard for lists regarding sorting by column. The 'ARMS Msg' column header does not directly translate for Germany; rather, it is 'ARMS'.

#### 3.3.2 Validation

None have been identified at this time.

#### 3.3.3 Business Exceptions

None have been identified at this time.

#### 3.3.4 System Exceptions

None have been identified at this time.

### 3.4 Button Line Area

#### 3.4.1 Print All Records button

##### 3.4.1.1 Behavior

The Print All Records button will essentially generate an html report and send it to the printer. This will allow the user to print the entire collection of notes associated with a reservation/ticket. This report will not be sent to the screen, it will only be sent to the printer. (See Figure 4 – Print All Records.)

##### 3.4.1.2 Validation

No validation is necessary.



Do yECARS 2	Date 12/21/01
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#### 3.4.1.3 Business Exceptions

None have been identified at this time.

#### 3.4.1.4 System Exceptions

None have been identified at this time.

#### 3.4.2 Add Note button

##### 3.4.2.1 Behavior

The Add Note button will display the Add Note screen for data input. (See Figure 2 – Add Note.)

##### 3.4.2.2 Validation

No validation is necessary.

##### 3.4.2.3 Business Exceptions

None have been identified at this time.

##### 3.4.2.4 System Exceptions

None have been identified at this time.

#### 3.4.3 Previous Button

##### 3.4.3.1 Behavior

The Previous button will take the user to the Vehicle/Shop screen within the same transaction.

##### 3.4.3.2 Validation

No validation is necessary.

##### 3.4.3.3 Business Exceptions

None have been identified at this time.

##### 3.4.3.4 System Exceptions

None have been identified at this time.

#### 3.4.4 Next Button

##### 3.4.4.1 Behavior

The Next button will take the user to the Drivers screen within the same transaction.

##### 3.4.4.2 Validation

No validation is necessary.

##### 3.4.4.3 Business Exceptions

None have been identified at this time.

##### 3.4.4.4 System Exceptions

None have been identified at this time.

#### 3.4.5 Complete Button

##### 3.4.5.1 Behavior

The Complete button will initiate a save of the transaction. All validations will be performed, returning any errors to the user. If there are no errors, the transaction is saved, and the user is returned to the Open Ticket home page.

##### 3.4.5.2 Validation

No validation is necessary.

Do yECARS 2	Date 12/21/01
-------------	---------------

#### 3.4.5.3 Business Exceptions

None have been identified at this time.

#### 3.4.5.4 System Exceptions

None have been identified at this time.

### 4. Add Note (Figure 2 – Add Note)

#### 4.1 Note

##### 4.1.1 Behavior

This is a free form text field in which the user may enter data.

##### 4.1.2 Validation

There must be data present in order for the note to be saved.

##### 4.1.3 Business Exceptions

None have been identified at this time.

##### 4.1.4 System Exceptions

None have been identified at this time.

#### 4.2 Button Line Area – Add Note

##### 4.2.1 OK button

##### 4.2.1.1 Behavior

If data is not present in the Notes text field the feedback message reads, "Please enter a Note if selecting to Save." Two options are presented, OK and Cancel. Ok will take the user back to the Add Note screen for data entry. Cancel will dismiss the Add Note screen.

Ok will be the default selection.

The application saves the Date/Time, Status, Type, Note text and Created By data at the time the note is committed to the database.

Type = Callback

Status = reservation/ticket status as of note creation

##### 4.2.1.2 Validation

There must be data present in the Notes text field.

##### 4.2.1.3 Business Exceptions

None have been identified at this time.

##### 4.2.1.4 System Exceptions

None have been identified at this time.

##### 4.2.2 Cancel button

##### 4.2.2.1 Behavior

This button will dismiss the Add Note screen without saving any data.

Do yECARS 2	Date 12/21/01
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#### 4.2.2.2 Validation

If data has been entered the following feedback message is displayed: "Are you sure you want to exit and lose the entered information?". Two options are presented, Yes and No. Yes will dismiss the screen and not save the data. No will take the user back to the Add Note screen.

The default button selection is "No".

#### 4.2.2.3 Business Exceptions

None have been identified at this time.

#### 4.2.2.4 System Exceptions

None have been identified at this time.

### 5. View Note (Figure 3 – View Note)

This is a read only screen .

#### 5.1 Data

##### 5.1.1 Behavior

This is a listing of the values associated with the selected note, this includes;

- Date/Time
- Status
- Type
- Created By
- Arms Message Status
- Note text

The Note text field should be large enough to display the entire 510 characters as defined in the database.

##### 5.1.2 Validation

No validation is necessary.

##### 5.1.3 Business Exceptions

None have been identified at this time.

##### 5.1.4 System Exceptions

None have been identified at this time.

#### 5.2 Button Line Area – View Note

##### 5.2.1 Print button

###### 5.2.1.1 Behavior

This button will essentially print a screen print of the View Note screen .

###### 5.2.1.2 Validation

No validation is necessary.

###### 5.2.1.3 Business Exceptions

None have been identified at this time.

###### 5.2.1.4 System Exceptions

None have been identified at this time.

##### 5.2.2 Close button

###### 5.2.2.1 Behavior

This button will dismiss the View Note screen .

Do yECARS 2	Date 12/21/01
-------------	---------------

#### 5.2.2.2 Validation

None have been identified at this time.

#### 5.2.2.3 Business Exceptions

None have been identified at this time.

#### 5.2.2.4 System Exceptions

None have been identified at this time.

### 6. Rules

#### 6.1 Required Fields

The Note text field is required for creating a note. Feedback messages will be presented, as defined previously in this document, when attempting to save a note without the required information .

#### 6.2 Saving

A note must be defined before the data can be saved to the database .

### 7. Security

The user must have the appropriate security level to access this screen .

---

# Enterprise Rent-A-Car

---

## ECARS 2.0 - Open Ticket Search Screen Action Specification

1. The user enters the search criteria in the search form.  
2. The user clicks the search button.  
3. The system displays the search results in a table.  
4. The user can click on a result to view more details.  
5. The user can click on a result to add it to the cart.  
6. The user can click on a result to remove it from the cart.  
7. The user can click on a result to view the booking details.  
8. The user can click on a result to cancel the booking.  
9. The user can click on a result to view the booking history.  
10. The user can click on a result to view the booking status.

Version: <1.0>	
ECARS 2	Date: <dd/mmm/yy>
<document identifier>	

## Revision History

Date	Version	Description	Author
04/12/2001	1.0	Created Template	Marty Tichy
04/16/2001	2.0	Created document	Marty Tichy
04/18/2001	2.1	Modified Account Name/Number search capability to limit it to Bill-To/Shop, changed verbiage on screen shots as well.	Marty Tichy
04/19/2001	2.2	Removed the items that were added in 2.1	Marty Tichy
05/08/2001	2.3	Added field disabling/enabling subsequent to search invocation logic	Marty Tichy
05/14/2001	2.4	Modified field behavior subsequent to search invocation logic	Marty Tichy
06/12/2001	2.5	Replaced screen shots.	Marty Tichy

	Version: <1.0>
ECARS 2	Date: <dd/mmm/yy>
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8.	RO/PO/Claim Number	10
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	Version: <1.0>
ECARS 2	Date: <dd/mm/yy>
<document identifier>	

Enterprise ECARS Application - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Reservation Contracts Callbacks Rates Tools Help ARMS

### Open Ticket Search

Group:  Branch:  [Advanced Search](#)

Ticket Number:  Renter Last Name:  Renter First Name:  Renter Telephone Number:

GR/BR	Renter Name	Phone #	Unit #	RO/PO/Claim #	Unit Plate #	Open Date	Bill-To/Shop	Ticket #
0101	AQUILINO, BEATRICE	2022543525	30622C8G6WXH3WSSURLZY04			02/03/2001	ALLSTATE INS-ST. LOUIS**	3HXW6G
0101	AQUILINO, BEATRICE	2022543525	30622C8G6WXH3WSSURLZY04			02/03/2001	ALLSTATE INS-ST. LOUIS**	3HXW6H
0101	AQUILINO, BEATRICE	2022543525	30622C8G6WXH3WSSURLZY04			02/03/2001	ALLSTATE INS-ST. LOUIS**	3HXW6I

Items 1 - 3 of 3 found

First Prev 1 Next Last

Figure 2 - Simple Search with Search Results



ECARS 2	Version: <1.0>
<document identifier>	Date: <dd/mm/yy>

Enterprise ECARS Application - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Reservation Contracts Callbacks Rates Tools Help ARMS

### Open Ticket Search

Group:  Branch:  [Simple Search](#)

Ticket Number:  Renter Last Name:  Renter First Name:  Renter Telephone Number:

RO/PO/Claim Number:  Unit Number:  Unit Plate Number:  Open Ticket Date:

☒ Bill-To/Shop Name ☐ Bill-To/Shop Number

GR/BR	Renter Name	Phone #	Unit #	RO/PO/Claim #	Unit Plate #	Open Date	Bill-To/Shop	Ticket #
0101	AQUILINO, BEATRICE	2022543525	30622C8G6WXH3WSSURLZVO4			02/03/2001	ALLSTATE INS-ST. LOUIS**	3HXW6G
0101	AQUILINO, BEATRICE	2022543525	30622C8G6WXH3WSSURLZVO4			02/03/2001	ALLSTATE INS-ST. LOUIS**	3HXW6H
0101	AQUILINO, BEATRICE	2022543525	30622C8G6WXH3WSSURLZVO4			02/03/2001	ALLSTATE INS-ST. LOUIS**	3HXW6I

Items 1 - 3 of 3 found

First Prev 1 Next Last

Figure 4 - Advanced Search with Search Results

-1 mon		July 2001					+1 mon	
Sun	Mon	Tue	Wed	Thu	Fri	Sat		
1	2	3	4	5	6	7		
8	9	10	11	12	13	14		
15	16	17	18	19	20	21		
22	23	24	25	26	27	28		
29	30	31						

Figure 5 - Calendar selection

### 3. Group

#### 3.1 Behavior

This search criterion will be limited to active rental groups. The selection of "All" is also included, and will appear at the top, or first, in the list . This search criteria area will be a drop-down box. The users would also like to have the ability to type a character, alpha or numeric, into the criteria area and have the drop down list position to the character. (If the user enters an "H" the drop down list would position to the first string beginning with "H" in the list) The default item should be the group associated to the terminal locale .

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<document identifier>	

### 3.2 Validation

The items appearing in the list are static; the user cannot add items to the list dynamically.

### 3.3 Business Exceptions

The user should not be allowed to view or select a group outside of security parameters.

### 3.4 System Exceptions

None identified at this time.

## 4. Branch

### 4.1 Behavior

This search criterion will be limited to active branches. The selection of "All" is also included, and will appear at the top, or first, in the list. This search criteria area will be a drop-down box. The users would also like to have the ability to type a character, alpha or numeric, into the criteria area and have the drop down list position to the character. (If the user enters an "H" the drop down list would position to the first string beginning with "H" in the list)

The default item should be the branch associated to the terminal locale. Branch items appearing in the list will be limited to the Group item selected. Once the selected Group item has changed, the first item (All) will be the default selection item.

### 4.2 Validation

The items appearing in the list are static; the user cannot add items to the list dynamically.

### 4.3 Business Exceptions

The user should not be allowed to view or select a branch outside of security parameters.

### 4.4 System Exceptions

None identified at this time.

## 5. Ticket Number

### 5.1 Behavior

This search area will be an alphanumeric field. It will return exact matches for the characters entered. When this search criterion is used, any other entered criteria will be ignored by the system. Alphanumeric values will be accepted into this field.

### 5.2 Validation

None identified at this time.

### 5.3 Business Exceptions

None identified at this time.

### 5.4 System Exceptions

None identified at this time.

## 6. Renter Name Last / First

### 6.1 Behavior

This search criteria area will be an text field containing an implied wildcard after the entered criteria. The First Name field will not be enabled until search criteria has been entered into the Last Name field. Thus,

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the First Name field will not be accessible via either the tab key or the mouse unless Last Name data is present.

It should be noted that either **Last Name** or **Last Name and First Name** used in combination, is considered to be just one search criteria.

It will return exact matches for the characters entered and will continue with other text strings that match the characters entered, but are of a longer length (an implied wildcard). Example: If the **Last Name** search criteria entered were "Smith", you would receive back every open ticket with "Smith" in the Last name. You would also receive every character string that matched "Smith" for the first 5 characters, but was longer than five characters. Given this, you would also receive, "Smither", "Smithson", "Smithy", etc. These longer character matches would be alphabetically ascending after the exact character matches of equal length. The First Name field behaves in the same manner.

## 6.2 Validation

None identified at this time.

## 6.3 Business Exceptions

None identified at this time.

## 6.4 System Exceptions

None identified at this time.

## 7. Renter Telephone Number

### 7.1 Behavior

This search criteria area will be an alphanumeric field. It will not be formatted for presentation purposes. Returns exact matches for the characters entered . A phone number is considered to be the entire number including area code. Example: In the United States, it would be the 3 digit area code, plus the seven digit phone number. (Country Code is not considered a part of the phone number.) The search will be on all phone number fields associated with the Driver/Renter. Currently, these are Home, Office and Other.

### 7.2 Validation

None identified at this time.

### 7.3 Business Exceptions

None identified at this time.

### 7.4 System Exceptions

None identified at this time.

## 8. RO/PO/Claim Number

### 8.1 Behavior

This search criteria area will be an alphanumeric field. Returns exact matches for the characters entered .

### 8.2 Validation

None identified at this time.

### 8.3 Business Exceptions

None identified at this time.

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ECARS 2	Date: <dd/mmm/yy>
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#### 8.4 System Exceptions

None identified at this time.

### 9. Unit Number

#### 9.1 Behavior

This search criteria area will be an alphanumeric field.  
Returns exact matches for the characters entered .

#### 9.2 Validation

None identified at this time.

#### 9.3 Business Exceptions

None identified at this time.

#### 9.4 System Exceptions

None identified at this time.

### 10. Open Ticket Date

#### 10.1 Behavior

Only numeric values will be accepted into these areas. The search to the database will be an exact numeric, time stamp match . Associated with this field, is a calendar function that allows the user to select a date from a calendar screen, or similar feature, instead of entering a value (Figure 5 - Calendar selection). Clicking on the calendar icon will display the screen, once a date is selected from the screen the Open Ticket Date field will be populated with the appropriate date.

Returns exact matches for the characters entered. It will not be formatted for presentation purposes. The user may enter delineating characters, but these will be stripped out before searching the database to find an exact date match.

#### 10.2 Validation

None identified at this time.

#### 10.3 Business Exceptions

None identified at this time.

#### 10.4 System Exceptions

None identified at this time.

### 11. Unit Plate Number

#### 11.1 Behavior

This search criteria area will be an alphanumeric field.  
Returns exact matches for the characters entered.

#### 11.2 Validation

None identified at this time.

#### 11.3 Business Exceptions

None identified at this time.

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#### 11.4 System Exceptions

None identified at this time.

### 12. Bill-To/Shop Name/Number Group

This group of controls includes the Bill-To/Shop Name and the Bill-To/Shop Number radio buttons as well as a criteria text box.

#### 12.1 Behavior

This search criteria area will be an alphanumeric field regarding the text field. The Bill-To/Shop Name radio button will be the default selection upon screen entry.

When the Bill-To/Shop Name radio button is selected an implied wildcard will be added at the end of the entered search criteria. Example: If the **Bill-To/Shop Name** search criteria entered were "Smith", you would receive back every open ticket with "Smith" in the Bill-To/Shop name. You would also receive every character string that matched "Smith" for the first 5 characters, but was longer than five characters. Given this, you would also receive, "Smither", "Smithson", "Smithy", etc. These longer character matches would be alphabetically ascending after the exact character matches of equal length.

When the Bill-To/Shop Number radio button is selected it returns exact matches for the characters entered.

An entry into this field will search the Bill-To and Shop roles that an account (customer) may be and return all matches. Currently, the roles to which the search may be applied are "Shop" and "Bill-To".

#### 12.2 Validation

None identified at this time.

#### 12.3 Business Exceptions

None identified at this time.

#### 12.4 System Exceptions

Only one radio button can be selected at a given time.

### 13. Search Results Area

#### 13.1 Behavior

The result list will have a static column display sequence. All columns need to have the capability to be sorted, ascending and descending. The user selects an Open Ticket by clicking on the hyperlink associated with the desired data row.

The user must have the appropriate security to view/edit the open ticket selected.

#### 13.2 Validation

None identified at this time.

#### 13.3 Business Exceptions

None identified at this time.

#### 13.4 System Exceptions

None identified at this time.



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ECARS 2	Date: <dd/mmm/yy>
<document identifier>	

## 14. Advanced Search / Simple Search hyperlink

### 14.1 Behavior

By clicking on the Advanced Search hyperlink, the user is presented with the advanced search functionality (Figure 3 - Advanced Search). Alternatively, by clicking on the Simple Search hyperlink, the user is presented with the default search screen (Figure 1 - Initial Entry – Simple Search). Any search criteria entered when on the default search screen will be passed to the Advanced Search screen if/when accessed. If the user navigates to the Simple Search screen from the Advanced Search screen, any search criteria entered into the advanced criterion that is not found on simple search will be lost.

### 14.2 Validation

None identified at this time.

### 14.3 Business Exceptions

None identified at this time.

### 14.4 System Exceptions

None identified at this time.

## 15. Results Feedback Line Area

### 15.1 Behavior

This feedback area provides the user with the search result list count as well as list navigation. The user may select the block of records available as returned by the invoked search criteria. These blocks are identified by sequential numbers, along with a First (1<sup>st</sup> block of records) and Last (last block of records). Also appearing will be the Prev and Next. When negotiating through the result list the sequential numbers will change depending upon the block of records being viewed, other blocks of records can be accessed via the Prev and Next hyperlinks. For example looking at the Figure 2 - Simple Search with Search Results if the user selected Next, the sequential numbers listed will range from 2-6. If the user wishes to return to record block 1, they can either select First or Prev to view record blocks 1-5 again.

### 15.2 Validation

None identified at this time.

### 15.3 Business Exceptions

None identified at this time.

### 15.4 System Exceptions

None identified at this time.

## 16. Button Line Area

### 16.1 Behavior

The Search image/button will invoke the search process, submitting the form to the server. The search can be invoked by clicking on the button or the user using the enter key.

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The Reset control will return the screen to its default state. The default state being search criteria controls blank, group/branch default to terminal locale and an empty result area.

The system should determine that no more than the set limit of three search criteria have been entered.

## 16.2 Validation

None identified at this time.

## 16.3 Business Exceptions

A limit of three search criteria may be entered.

If Ticket Number is entered, all other search criteria are ignored .

## 16.4 System Exceptions

If more than three search criteria are entered the user should be presented with a feedback message stating "A limit of three search criteria may be entered, Please refine your search."

## 17. Rules

The Renter Name Last / First and Account Name search criteria have an implied wild card character placed directly after the entered text, all other search criteria fields on this screen are to be treated as exact matches with searching.

The user may invoke the search without changing or adding any search criteria to the default screen entry criteria. The user may increase the scope of the search by selecting all groups and/or all branches, no detailed search criteria is necessary when using this screen.

There is a limit of three search criteria on which a search may be executed. This does not include the Group and Branch selections. If more than three are entered the system will present to the user an appropriate feedback message stating that a maximum of three search criteria may be entered. This message will be displayed a form submittal.

When there are not any matches to the input search criteria the user should be presented with a feedback message stating no items were found. This text should appear in the 0 listed below.

- 1) If the search returns more open tickets than can be displayed on the screen at one time, then the system needs to present to the user the range of records they are viewing out of the total number of records

All of the following search criteria, EXCEPT Ticket Number, will be limited to, or constrained by, the Group and Branch indicated or selected.

## 18. Security

The user must have the appropriate security level to access this screen.

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# Enterprise Rent-A-Car

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## **ECARS 2.0 - Open Ticket without Payment Screen Action Specification**

**Version <1.0>**

Version: <1.0>	
ECARS 2	Date: 12/4/2001

## Revision History

Date	Version	Description	Author
12/04/2001	1.0	Created document	Marty Tichy

	Version: <1.0>
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## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Open Ticket without Payment Use Case. This document also extends the screen action specification documents associated with the reservation iteration, which includes the following screens:

- Driver
- Additional Driver
- Other Address
- Insurance Detail
- Cash Qualification
- Referral
- Bill-To
- Vehicle / Shop
- Dates / Rates
- Notes
- Application Locking

The user enters the new ticket process via the menu Tickets:New. This process behaves in the same manner as the previously defined Reservation process, opening a new record as an open ticket rather than a reservation.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

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## 2. Screen Prints

E3846G 0101 Enterprise ECARS Application - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

Reservation Tickets Callbacks Vehicle Tools Help

**DRIVERS** Driver - Options - Go X

Renter Add Drivers

**REFERRAL** Driver Other Address Insurance Detail Cash Qualification

**DATES/RATES** Clear

**BILL-TO**

**VEHICLE/SHOP**

**NOTES**  
Notes Taken : 1

**Driver Name and Address**

Last Name: \* First Name: \*

Home Address Address: \*

Phone Numbers Home: Work: Extension: ZIP: \* Country: \*

Employer: City: \* State: \*

Other Phone and Type: \*

**Drivers License**

License Number: \* Expiration Date: \*

Issuing Country: State Issued: \*

UNITED STATES Date of Birth: \*

SSN: \* Eye Color: \* Height: \*

Hair Color: \* Weight: \*

Primary Payment Method: \*

Next Complete

Tkt -139VC2

Figure 1 - Driver

**DRIVERS** **Driver** **Options** **Go**

Reservation: 0 Tickets: 0 Callbacks: 0 Vehicle: 0 Tools: 0 Help: 0

Additional Drivers: 1 **Renter** **Driver** **Add Drivers**

**REFERRAL** **Driver** **Other Address** **Insurance Detail** **Cash Qualification**

**DATES/RATES** **Clear** **Delete**

**BILL-TO**

**VEHICLE/SHOP**

**NOTES** Notes Taken : 1

**Driver Name and Address**

Last Name: \* First Name: \*

Phone Numbers Home: Work: Extension:

Employer:

Other Phone and Type:

Home Address ☐ Same as Renter Address:

ZIP: Country: UNITED STAT

City: State:

**Drivers License**

License Number: Expiration Date:

Issuing Country: State Issued: UNITED STAT

SSN: Date of Birth: \*

Eye Color: Height:

Hair Color: Weight:

Credit Card Number Credit Card First Name Credit Card Last Name

Credit Card Type CC Expiration Date

Tkt - 139VC2 **Next** **Complete**

Figure 2 – Additional Driver

**Complete -- Web Page Dialog**

**Complete**

☒ Complete

☐ Complete - Unit Pend

☐ Complete - Pre-Write

**OK** **Cancel**

Figure 3 - Complete

### 3. Driver

#### 3.1 Driver

##### 3.1.1 Behavior

This screen primarily behaves in the same manner as in Reservation. The following fields are required for this process:

- Last Name
- First Name



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- Address
- Zip
- Country
- City
- State
- License Number
- Expiration Date
- State Issued
- Date of Birth
- Social Security Number
- Height
- Eye Color
- Weight
- Hair Color

All conditionally required fields and behaviors defined during the Reservation iteration apply

### 3.1.2 *Validation*

No validation is necessary.

### 3.1.3 *Business Exceptions*

None have been identified at this time.

### 3.1.4 *System Exceptions*

None have been identified at this time.

## 4. **Additional Driver**

### 4.1 **Additional Driver**

#### 4.1.1 *Behavior*

This screen primarily behaves in the same manner as in Reservation. The following fields are required for this process:

- Last Name
- First Name
- Date of Birth

The following fields are conditionally required for this process:

- If License Number is entered then
  - State Issued
  - Expiration Date (Drivers License section)
- If Address is entered then
  - Last Name
  - First Name
  - Zip
  - Country
  - City
  - State

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All conditionally required fields and behaviors defined during the Reservation iteration apply.

#### 4.1.2 Validation

No validation is necessary.

#### 4.1.3 Business Exceptions

None have been identified at this time.

#### 4.1.4 System Exceptions

None have been identified at this time.

### 5. Complete

The complete process primarily behaves in the same manner as that defined in the Reservation iteration with the exception of the items listed below. This includes confirmation dialogs and validations.

#### 5.1 Form

##### 5.1.1 Behavior

Only one selection can be made. The default selection will be "Complete"

The OK button will invoke the validation and save process.

The Cancel button will dismiss the form, placing the user back to where they invoked the process.

##### 5.1.2 Validation

Complete - When this option is selected all validations are invoked. This includes the required fields defined in the Driver and Additional Driver sections above as well as those conditionally required fields and validations defined in the Reservation iteration. During this iteration of the Open Ticket project a ticket will cannot be saved in this status due to the missing Unit Pend data described below. Thus during this iteration a ticket can be saved in Complete - Pre-Write or Complete - Unit-Pend status only.

Complete - Unit-Pend - When this option is selected all validations except those involving an assigned unit are invoked. This includes Unit Number and License Plate Number which currently do not exist in the screens being used, these will be added to the Dates/Rates screen in future iterations of the Open Ticket project.

Complete - Pre-Write - When this option is selected the Drivers Last and First names along with the Billing Cycle from the Dates/Rates screen and only those validations that are conditional required information are invoked. These sets of validations are primarily defined in the Reservation use cases.

If the user selects to save a ticket and it fails the necessary validation, the system will provide a feedback message listing the offending items. The user will then be allowed to save the ticket in a "lesser" open ticket status via the "Complete" button.

##### 5.1.3 Business Exceptions

None have been identified at this time.

##### 5.1.4 System Exceptions

None have been identified at this time.

### 6. Rules

#### 6.1 Required Fields

Since this document is an extension of the screen action specification document defined in the Reservation and Open Ticket projects, the required fields and conditionally required fields along with all of the associated validations pertain to this document as well.

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## 6.2 Saving

The save is completed when the user saves the ticket. When the ticket saves successfully the application will navigate to the Ticket Search screen.

## 7. Security

The user must have the appropriate security level to access the screens.

## ECARS 2.0 - Open Ticket Retrieve Rates Screen Action Specification

[illegible]

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# Enterprise Rent-A-Car

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## Revision History

Date	Version	Description	Author
9/20/2001	1.0	Created Document	Johnny S. Johnston
10/10/2001	1.1	Revisions after second prototype meeting	Johnny S. Johnston

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# Enterprise Rent-A-Car

## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Open Ticket Retrieve Rate(s) screens.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Open Ticket Retrieve Rates - Screens

Res - 411761 Tkt - 234567 Cbk - 363221

keycode=44 Local Internet

Top portion of Rates panel

# Enterprise Rent-A-Car

Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss

Address [file:///I:/APPS/Ecars\\_20/Development%20%20Projects/HTML/Open%20Ticket/Rates/Rates.html#RateSource](file:///I:/APPS/Ecars_20/Development%20%20Projects/HTML/Open%20Ticket/Rates/Rates.html#RateSource) Go

Links Customize Links Free Hotmail Windows STLtoday news special report

Reservation ~2 Contracts ~ Callbacks ~

**DRIVERS** Dates/Rates -Options- Go

Driver summary 1  
Driver summary 2 | - Select -

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

Unit Information  
Vehicle Preferences

Unit # License Plate # Last 6 of VIN Units Available

2000 Chevrolet Impala ICAR

Class to Charge for Get Rates

Rates

Daily		Weekly		Monthly		Hourly		Mileage Charge	No Charge
Rate	Mileage	Rate	Mileage	Rate	Mileage	Rate	Mileage		
15.99	150	59.99	750	179.99	1500	5.99	0.15		

Coverages CDW,PAI,SLP

OK Cancel

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

Keycode=44 Local intranet

Bottom portion of Rates Panel

# Enterprise Rent-A-Car

Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss

Address [file:///I:/APPS/Ecars\\_20/Development%20%20Projects/HTML/Open%20Ticket/Rates/Rates.html#RateSource](file:///I:/APPS/Ecars_20/Development%20%20Projects/HTML/Open%20Ticket/Rates/Rates.html#RateSource)

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Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Dates/Rates** Options Go

Pickup Date: 10/04/2001 Time: 9:00 AM Return Date: 10/08/2001 Time: 3:00 PM

Start Charges if Different Change Return Information

Select Date For Charges To Start: OP Elco Chevrolet

Unit Number Account Search

Date Time Rental Type Billing Cycle

OK Cancel Last 6 of VIN Units Available

2000 Chevrolet Impala ICAR

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

keycode=44 Local intranet

Start Charges if Different pop-up box

# Enterprise Rent-A-Car

Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss

Address file:///I:/APPS/Ecars\_20/Development%20%20Projects/HTML/Open%20Ticket/Rates/Rates.html#RateSource

Links Enterprise Links Free Rental Windows STToday news special report

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Dates/Rates** - Options - Go

Pickup Date: 10/04/2001 Time: 9:00 AM Return Date: 10/09/2001 Time: 3:00 PM

Start Charges if Different Change Return Information

10/04/2001 9:00 Change Return Information

Rate Source: Select Return Location  
Account Name: Group: Branch:  
-Select- Method: Location:  
Rate Plan: -Select-  
-Select- OK Cancel

Unit Information  
Vehicle Preferences

Unit # License Plate # Last 6 of VIN Units Available

2000 Chevrolet Impala ICAR

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

keycode=44 Local intranet

Change Return Information pop-up box

# Enterprise Rent-A-Car

DATE	DESCRIPTION	AMOUNT	BALANCE
1890	Jan 1		100.00
	Feb 1	10.00	110.00
	Mar 1	20.00	130.00
	Apr 1	30.00	160.00
	May 1	40.00	200.00
	Jun 1	50.00	250.00
	Jul 1	60.00	310.00
	Aug 1	70.00	380.00
	Sep 1	80.00	460.00
	Oct 1	90.00	550.00
	Nov 1	100.00	650.00
	Dec 1	110.00	760.00
1891	Jan 1	120.00	880.00
	Feb 1	130.00	1010.00
	Mar 1	140.00	1150.00
	Apr 1	150.00	1300.00
	May 1	160.00	1460.00
	Jun 1	170.00	1630.00
	Jul 1	180.00	1810.00
	Aug 1	190.00	2000.00
	Sep 1	200.00	2200.00
	Oct 1	210.00	2410.00
	Nov 1	220.00	2630.00
	Dec 1	230.00	2860.00
1892	Jan 1	240.00	3100.00
	Feb 1	250.00	3350.00
	Mar 1	260.00	3610.00
	Apr 1	270.00	3880.00
	May 1	280.00	4160.00
	Jun 1	290.00	4450.00
	Jul 1	300.00	4750.00
	Aug 1	310.00	5060.00
	Sep 1	320.00	5380.00
	Oct 1	330.00	5710.00
	Nov 1	340.00	6050.00
	Dec 1	350.00	6400.00
1893	Jan 1	360.00	6760.00
	Feb 1	370.00	7130.00
	Mar 1	380.00	7510.00
	Apr 1	390.00	7900.00
	May 1	400.00	8300.00
	Jun 1	410.00	8710.00
	Jul 1	420.00	9130.00
	Aug 1	430.00	9560.00
	Sep 1	440.00	10000.00
	Oct 1	450.00	10450.00
	Nov 1	460.00	10910.00
	Dec 1	470.00	11380.00
1894	Jan 1	480.00	11860.00
	Feb 1	490.00	12350.00
	Mar 1	500.00	12850.00
	Apr 1	510.00	13360.00
	May 1	520.00	13880.00
	Jun 1	530.00	14410.00
	Jul 1	540.00	14950.00
	Aug 1	550.00	15500.00
	Sep 1	560.00	16060.00
	Oct 1	570.00	16630.00
	Nov 1	580.00	17210.00
	Dec 1	590.00	17800.00
1895	Jan 1	600.00	18400.00
	Feb 1	610.00	19010.00
	Mar 1	620.00	19630.00
	Apr 1	630.00	20260.00
	May 1	640.00	20900.00
	Jun 1	650.00	21550.00
	Jul 1	660.00	22210.00
	Aug 1	670.00	22880.00
	Sep 1	680.00	23560.00
	Oct 1	690.00	24250.00
	Nov 1	700.00	24950.00
	Dec 1	710.00	25660.00
1896	Jan 1	720.00	26380.00
	Feb 1	730.00	27110.00
	Mar 1	740.00	27850.00
	Apr 1	750.00	28600.00
	May 1	760.00	29360.00
	Jun 1	770.00	30130.00
	Jul 1	780.00	30910.00
	Aug 1	790.00	31700.00
	Sep 1	800.00	32500.00
	Oct 1	810.00	33310.00
	Nov 1	820.00	34130.00
	Dec 1	830.00	34960.00
1897	Jan 1	840.00	35800.00
	Feb 1	850.00	36650.00
	Mar 1	860.00	375

### Account Search Display

# Enterprise Rent-A-Car

Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss

Address: file:///Y:/APPS/Ecars\_20/Development%20%20Projects/HTML/Oper%20Ticket/Rates/Rates.htm#RateSource

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Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Dates/Rates** - Options - Go

Pickup: \_\_\_\_\_ Return: \_\_\_\_\_

**Units Available**

Group: \_\_\_\_\_ Branch: \_\_\_\_\_

Unit #: \_\_\_\_\_ License Plate #: \_\_\_\_\_ Last 6 of VIN: \_\_\_\_\_ Search

Year	Make	Model	Series	Class	License	Location
1999	Mercury	Cougar	Series L	BCAR	W13-527	Sant Louis - Lindell branch
2000	Cadillac	Catera	Series N	CCAR	X13-539	Ladue
2000	Ford	Explorer	Series R	CCAR	X22-398	Ladue
2000	Chevrolet	Impala	Series P	DCAR	Y29-238	Brentwood Blvd.
2000	Chevrolet	Metro	Series B	DCAR	Y26-295	Brentwood Blvd.
2000	Ford	Escort	Series V	DCAR	Y22-398	Brentwood Blvd.

2000 Chevrolet Impala ICAR

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

Done Local intranet

Units Available pop-up box



# Enterprise Rent-A-Car

Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss

Address [file:///I:/APPS/Ecars\\_20/Development/20%20Projects/HTML/Open%20Ticket/Rates/Rates.html#RateSource](#) Go

Links [Customize Links](#) [Free Hotmail](#) [Windows](#) [STLtoday - news - special report](#)

Reservation ~o Contracts ~ Contracts Callbacks ~

**DRIVERS** Dates/Rates - Options - Go X

Driver summary 1  
Driver summary 2 | - Select -

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

Unit Information  
Vehicle Preferences

**Rates Table**

Car Class	Daily		Weekly		Monthly		Hourly	Mileage
	Rate	Mileage	Rate	Mileage	Rate	Mileage	Rate	Charge
GCAR	9.99	250	29.99	500	99.99	2500	2.99	0.25
ECAR	15.99	250	34.99	500	109.99	2500	3.99	0.25
FCAR	20.99	250	39.99	500	209.99	2500	4.99	0.25
SCAR	25.99	250	44.99	500	249.99	2500	5.99	0.25
PCAR	30.99	250	49.99	500	309.99	2500	6.99	0.25
LCAR	35.99	250	54.99	500	409.99	2500	7.99	0.25

Cancel

OK Cancel

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

Local intranet

Get Rates display area

# Enterprise Rent-A-Car

Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss

Address [file:///Y:/APPS/Ecars\\_20/Development%20%20Projects/HTML/Open%20Ticket/Rates/Rates.html#RateSource](file:///Y:/APPS/Ecars_20/Development%20%20Projects/HTML/Open%20Ticket/Rates/Rates.html#RateSource) Go

Links [Customize Links](#) [Free Hotmail](#) [Windows](#) [STL today news special report](#)

Reservation Contracts Callbacks

**DRIVERS**  
Driver summary 1  
Driver summary 2

**REFERRAL**  
Referral sum 1  
Referral sum 2

**DATES/RATES**  
Dates summary 1  
Dates summary 2

**BILL-TO**  
Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**  
Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**  
Notes summary 1  
Notes summary 2

**Dates/Rates** - Options - Go

Class to Charge for  Get Rates

**Rates**

Daily		Weekly		Monthly		Hourly		Mileage Charge		No. Charge	
Rate	Mileage	Rate	Mileage	Rate	Mileage	Rate	Mileage	Rate	Mileage	Rate	Mileage
15.99	150	59.99	750	179.99	1500	5.99		0.15			

**Coverages** CDW,PAI,SLP

Item	Rate	Per	Start Date	Start Time	End Date	End Time
CDW	999.99	Monthly	12/22/2002	11:15 AM	12/24/2002	12:25 PM
PAI	999.99	Weekly	12/22/2002	11:15 AM	12/25/2002	8:45 PM
SLP	112.99	Weekly	12/22/2002	4:55 PM	12/25/2002	9:00 PM
-Select-						

OK Cancel

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

Keycode=44 Local intranet

Expanded Coverages display area

## 3. Open Ticket Number

### 3.1 Behavior

This area shows the unique open ticket number that has been assigned to the newly created ticket. The ticket number is 6 alphanumeric characters long.

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# Enterprise Rent-A-Car

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If another reservation or ticket is open, its reservation/ticket number will be displayed in this area as well. The user will have the ability to have up to 3 reservations/tickets open at a time. A hyperlink will be available on the reservation/ticket numbers of the reservations that are NOT currently being displayed. For the reservation/ticket that is currently displayed, the reservation/ticket number will not have a hyperlink available. This is to allow the user to navigate between the open reservations/ticket.

## 3.2 Validation

None identified at this time.

## 3.3 Business Exceptions

If the user tries to open a 4<sup>th</sup> reservation, the system will display a message stating, "A maximum of 3 reservations/tickets may be displayed".

## 3.4 System Exceptions

None identified at this time.

## 4. Pick Up Group and Branch Area

### 4.1 Behavior

This area will be defaulted to the terminal location group and branch. A group and branch are required and it will be displayed in the header information.

### 4.2 Validation

None, it will correspond to the PeopleSoft determined values.

### 4.3 Business Exceptions

None identified at this time.

### 4.4 System Exceptions

None identified at this time.

## 5. Pick Up Date Area

### 5.1 Behavior

This area will be an alphanumeric field. It will not be formatted for presentation purposes. The user may enter delineating characters, but these will be stripped out before writing to the database. There should be a calendar function available which would allow the user to select a date from a calendar icon, or similar feature, instead of entering a value. If the user selects a date from the calendar icons, it will be displayed in the date area formatted appropriately by the locale. (As determined for all locale specific formatting.) It should initially default to the current date.

### 5.2 Validation

It will be a valid month, day and year combination.

### 5.3 Business Exceptions

If the user enters or selects a Pick-up date which is prior to the current date, display a message

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# Enterprise Rent-A-Car

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"Pick-up date is prior to current date. Is this correct?"

If the user enters or selects a Pick-up date which is in the future, display a message "Pick-up date cannot be in the future."

A pick up date is required. If it is blanked out, not input or selected, display a message "Must specify a pick-up date".

## 5.4 System Exceptions

If not a valid month, day and year combination, the normal date in error message should be displayed.

## 6. Pick Up Time Area

### 6.1 Behavior

#### **In locales where time is shown by AM PM designation:**

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute and AM/PM designation, and a maximum of Hour Hour Minute Minute AM/PM designation. i.e. 945A, would designate 9:45 in the morning. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes **must** be two numeric values. The AM/PM designation of "A" or "P" must also be indicated. The user may enter delineating characters, but these will be removed before saving to the database.

#### **In locales where time is shown by 24 hour designation:**

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute, and a maximum of Hour Hour Minute Minute, i.e. 945 would designate 9:45 in the morning, 1425 would designate 2:25 in the afternoon. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes must be **two** numeric values. The user may enter delineating characters, but these will be removed before saving to the database.

It should initially default to the current time.

### 6.2 Validation

#### **In locales where time is shown by AM PM designation:**

Time increments can range from 1200A to 1159A and from 1200P until 1159P. If an entry is not within these two ranges display "Must specify a valid time".

#### **In locales where time is shown by 24 hour designation:**

Time increments can range from 0000 to 2400. If an entry is not within this range display "Must specify a valid time".

### 6.3 Business Exceptions

A pick-up time cannot be selected if there is not a pick-date selected. If this is attempted, display a message "Must specify a pick-up date".

If the user enters or selects a Pick-up time which is prior to the current time, display a message "Pick-up time is prior to current time. Is this correct?"

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# Enterprise Rent-A-Car

---

A pick up time is required. If the default value is removed, display a message "Must specify a pick-up time".

It is possible to have a pick-up time in the future, but the pick-up date must be the same.

## 6.4 System Exceptions

None identified at this time.

## 7. Pick Up Time Drop Down

### 7.1 Behavior

This drop down icon will display the time in 15-minute increments. When selected, it should be positioned to the ¼ hour increment immediately preceding the current time and format according to the locale's format.

### 7.2 Validation

None identified at this time.

### 7.3 Business Exceptions

A pick-up time cannot be selected if there is not a pick-date selected. If this is attempted, display a message "Must specify a pick-up date".

A pick up time is required. If the default value is removed, display a message "Must specify a pick-up time".

If the user enters or selects a Pick-up time which is prior to the current time, display a message "Pick-up time is prior to current time. Is this correct?"

It is possible to have a pick-up time in the future, but the pick-up date must be the same.

### 7.4 System Exceptions

None identified at this time.

## 8. Start Charges if Different Button Function

### 8.1 Behavior

Selecting this function will present the user will a pop-up box showing date and time fields. Information entered in the pop-up box will be displayed under the Start Charges if Different button function.

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# Enterprise Rent-A-Car

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## 8.2 Validation

See specific areas.

The ok feature will save date and time if valid.

The cancel feature will close the pop-up and not save entered information, if any.

## 8.3 Business Exceptions

See specific areas.

## 8.4 System Exceptions

None identified at this time.

## 9. Start Charges if Different Date Area

### 9.1 Behavior

This area will be an alphanumeric field. It will not be formatted for presentation purposes.

The user may enter delineating characters, but these will be stripped out before writing to the database. There should be a calendar function available which would allow the user to select a date from a calendar icon, or similar feature, instead of entering a value. If the user selects a date from the calendar icons, it will be displayed in the date area formatted appropriately by the locale. (As determined for all locale specific formatting.)

It should initially default a blank.

### 9.2 Validation

It will be a valid month, day and year combination.

### 9.3 Business Exceptions

The start charges if different date must be greater than or equal to the pick-up date, and less than or equal to the return date.

If the user enters or selects a start charges if different date which is prior to the Pick-up date, display a message "Start charges dates cannot be prior to pick-up date."

If the user enters or selects a start charges if different date which is after the return date, display a message "Start charges dates cannot be after return date."

### 9.4 System Exceptions

If not a valid month, day and year combination, the normal date in error message should be displayed.

## 10. Start Charges if Different Time Area

### 10.1 Behavior

**In locales where time is shown by AM PM designation:**

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute and AM/PM designation, and a maximum of Hour Hour Minute Minute AM/PM designation. i.e. 945A, would designate 9:45 in the morning. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes **must** be two numeric values.

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# Enterprise Rent-A-Car

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The AM/PM designation of "A" or "P" must also be indicated. The user may enter delineating characters, but these will be removed before saving to the database.

## **In locales where time is shown by 24 hour designation:**

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute, and a maximum of Hour Hour Minute Minute, i.e. 945 would designate 9:45 in the morning, 1425 would designate 2:25 in the afternoon. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes must be **two** numeric values. The user may enter delineating characters, but these will be removed before saving to the database.

It should initially default to blank.

### **10.2 Validation**

#### **In locales where time is shown by AM PM designation:**

Time increments can range from 1200A to 1159A and from 1200P until 1159P. If an entry is not within these two ranges display "Must specify a valid time".

#### **In locales where time is shown by 24 hour designation:**

Time increments can range from 0000 to 2400. If an entry is not within this range display "Must specify a valid time".

### **10.3 Business Exceptions**

A start charges if different time cannot be selected if there is not a start charges if different date. If this is attempted, display a message "Must specify a start charges if different date".

The start charges if different time must be greater than or equal to the pick-up time, if the start charges if different date is equal the pick-up date.

The start charges if different time must be less than or equal to the return time, if the start charges if different date is equal the return date.

If the start charges if different date is equal to the pick-up date and the user enters or selects a start charges if different time which is prior to the Pick-up time, display a message "Start charges time cannot be prior to pick-up time"

If the start charges if different date is equal to the return date and the user enters or selects a start charges if different time which is after the return time, display a message "Start charges time cannot be after return time"

### **10.4 System Exceptions**

None identified at this time.

## 11. Start Charges if Different Time Drop Down

### 11.1 Behavior

This drop down icon will display the time in 15-minute increments. When selected, it should be positioned to the ¼ hour increment immediately preceding the current time and format according to the locale's format.

### 11.2 Validation

None identified at this time.

### 11.3 Business Exceptions

A start charges if different time cannot be selected if there is not a start charges if different date. If this is attempted, display a message "Must specify a start charges if different date".

The start charges if different time must be greater than or equal to the pick-up time, if the start charges if different date is equal the pick-up date.

The start charges if different time must be less than or equal to the return time, if the start charges if different date is equal the return date.

If the start charges if different date is equal to the pick-up date and the user enters or selects a start charges if different time which is prior to the Pick-up time, display a message "Start charges time cannot be prior to pick-up time"

If the start charges if different date is equal to the return date and the user enters or selects a start charges if different time which is after the return time, display a message "Start charges time cannot be after return time"

### 11.4 System Exceptions

None identified at this time.

## 12. Return Date Area

### 12.1 Behavior

This area will be an alphanumeric field. It will not be formatted for presentation purposes.

The user may enter delineating characters, but these will be stripped out before writing to the database. There should be a calendar function available which would allow the user to select a date from a calendar icon, or similar feature, instead of entering a value. If the user selects a date from the calendar icons, it will be displayed in the date area formatted appropriately by the locale. (As determined for all locale specific formatting.) It should default to a blank area.



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# Enterprise Rent-A-Car

---

## 12.2 Validation

It will be a valid month, day and year combination.

## 12.3 Business Exceptions

A return date is required.

If the user does not enter a date a message is displayed "Return date must be specified".

The return date cannot be before the pick-up date. If it is, display message "Return date must be equal to, or after Pick-up date".

## 12.4 System Exceptions

If not a valid month, day and year combination, the normal date in error message should be displayed

## 13. Return Time Area

### 13.1 Behavior

**In locales where time is shown by AM PM designation:**

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute and AM/PM designation, and a maximum of Hour Hour Minute Minute AM/PM designation. i.e. 945A, would designate 9:45 in the morning. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes **must** be two numeric values. The AM/PM designation of "A" or "P" must also be indicated. The user may enter delineating characters, but these will be removed before saving to the database.

**In locales where time is shown by 24 hour designation:**

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute, and a maximum of Hour Hour Minute Minute, i.e. 945 would designate 9:45 in the morning, 1425 would designate 2:25 in the afternoon. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes must be **two** numeric values. The user may enter delineating characters, but these will be removed before saving to the database.

This should default to a blank area.

### 13.2 Validation

**In locales where time is shown by AM PM designation:**

Time increments can range from 1200A to 1159A and from 1200P until 1159P. If an entry is not within these two ranges display "Must specify a valid time".

**In locales where time is shown by 24 hour designation:**

Time increments can range from 0000 to 2400. If an entry is not within this range display "Must specify a valid time".

### 13.3 Business Exceptions

A return time is required.

If the user does not enter a time a message is displayed "Return time must be specified".

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# Enterprise Rent-A-Car

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A return time cannot be selected if there is not a return date entered or selected. If this is attempted, display a message "Must specify a return date".

If the return date is the same as the pickup date, then the return time must be later than the pickup time. If not, display a message "When pickup and return date are the same, return time must be later than pickup time".

## 13.4 System Exceptions

None identified at this time.

## 14. Return Time Drop Down

### 14.1 Behavior

This drop down icon will display the time in 15-minute increments. When selected, it should be positioned to the ¼ hour increment immediately preceding the current time and format according to the locale's format.

### 14.2 Validation

None identified at this time.

### 14.3 Business Exceptions

A return time is required.

If the user does not enter a time a message is displayed "Return time must be specified".

A return time cannot be selected if there is not a return date entered or selected. If this is attempted, display a message "Must specify a return date".

If the return date is the same as the pickup date, then the return time must be later than the pickup time. If not, display a message "When pickup and return date are the same, return time must be later than pickup time".

## 14.4 System Exceptions

None identified at this time.

## 15. Change Return Location Button Function

### 15.1 Behavior

Selecting this function will present the user will a pop-up box that will show the default group, branch (to the terminal's location) and return method drop down listings and a return location text area.

Only areas with changed information will be displayed under the Change Return Information button function. The terminal location default group and branch will NOT be displayed unless changes are made.

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## 15.2 Validation

See specific areas.

There are not any required areas.

The ok feature will save selected or entered information.

The cancel feature will close the pop-up and not save entered information, if any.

## 15.3 Business Exceptions

See specific areas.

## 15.4 System Exceptions

None identified at this time.

## 16. Change Return Location Group

### 16.1 Behavior

This drop down listing will be limited to those groups that exist at any point in time. The selection of "All" is NOT included in the list. The users would also like to have the ability to type a character, alpha or numeric, into the criteria area and have the drop down list position to the character. (If the user enters an "H" the drop down list would position to the first string beginning with "H" in the list)

This should default to the terminal location group.

### 16.2 Validation

The items appearing in the list are static; the user cannot add items to the list dynamically.

### 16.3 Business Exceptions

None identified at this time.

### 16.4 System Exceptions

None identified at this time.

## 17. Change Return Location Branch

### 17.1 Behavior

This drop down listing will be limited to those branches that exist within the group at any point in time. The selection of "All" is NOT included in this selection list. The users would also like to have the ability to type a character, alpha or numeric, into the criteria area and have the drop down list position to the character. (If the user enters an "H" the drop down list would position to the first string beginning with "H" in the list)

Branch items appearing in the list will be limited to the Group item selected. Once the selected Group item has changed, the branch will be set to blanks. This will require the user to select a branch, at which time the display area will be refreshed, repopulated and repositioned.

This will default to the terminal location branch.

### 17.2 Validation

The items appearing in the list are static; the user cannot add items to the list dynamically. This list will be limited to the branches associated with the group selected.

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## 17.3 Business Exceptions

None identified at this time.

## 17.4 System Exceptions

None identified at this time.

## 18. Change Return Location Method

### 18.1 Behavior

This drop down listing will be limited to values associated with the return method, currently the valid values are: Branch, Drop and Ride Back in North America and Branch, Ride Back and Automatic Pickup (APU) in Europe.

### 18.2 Validation

The items appearing in the list are static; the user cannot add items to the list dynamically.

### 18.3 Business Exceptions

None identified at this time.

### 18.4 System Exceptions

None identified at this time.

## 19. Change Return Location Text Area

### 19.1 Behavior

This will be a free form text area.

### 19.2 Validation

None identified at this time.

### 19.3 Business Exceptions

None identified at this time.

### 19.4 System Exceptions

None identified at this time.

## 20. Account Name Drop Down

### 20.1 Behavior

This area will be a drop down list of the Branch's short list, for North America. For everywhere else it will be the Group's Account list. If there are any of the following associated with the particular open ticket, they will appear at the top or beginning of the list in the following order.

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- 1) Any Bill-To Accounts
- 2) Any Referral Accounts
- 3) Any Shop Accounts

The information displayed about an Account will be in the following order:

- 1) Account Name
- 2) Account Number
- 3) Rental Type
- 4) Owning Group/Branch
- 5) Address
- 6) City
- 7) State
- 8) Zip
- 9) Telephone

The Account Name in the display area will have a hyper-link which, when selected, will populate the Account Name, Account Number, Account Type and Rate Plan areas on the Dates and Rates panel.

## **20.2 Validation**

None identified at this time.

## **20.3 Business Exceptions**

If Account name or number is selected and the following account types are determined, then other areas will be defaulted to the values shown.

## **20.4 System Exceptions**

None identified at this time.

## **21. Account Number Area**

### **21.1 Behavior**

This area will allow entry of alphanumeric values. When there is a match, the system will populate the Account Name, Account Number, Account Type and Rate Plan areas on the Dates and Rates panel. The search will be executed as the user tabs off of the field.

### **21.2 Validation**

None identified at this time.

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## 21.3 Business Exceptions

If there is not an exact match, then display a message "Account number does not exist."

## 21.4 System Exceptions

None identified at this time.

## 22. Account Search Button

### 22.1 Behavior

Selecting this button will display the account search panel. See Referral Source Supplementary Specification for details.

### 22.2 Validation

None identified at this time.

### 22.3 Business Exceptions

None identified at this time.

### 22.4 System Exceptions

None identified at this time.

## 23. Rate Plan Drop Down

### 23.1 Behavior

This area will be populated when an Account Name or Account Number has been selected. If there are multiple plans associated with an Account, it will list all of the rate plans associated with that Account, and the user must choose one. When there are multiple rate plans, the value "select" will appear in area so the user knows that there are multiple rate plans and selection of a single one is required. If there is only a single rate plan associated with an Account then the rate plan pop-up box will appear show all of the car classes and rates associated with that account.

### 23.2 Validation

None identified at this time.

### 23.3 Business Exceptions

If no rate plans are associated with an Account then a message is displayed "No rates were found".

### 23.4 System Exceptions

None identified at this time.

## 24. Rental Type Drop Down

### 24.1 Behavior

This area will be a drop down list of Rental types.

#### Rental Type

Insurance

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Bodyshop  
Dealership  
Retail  
Corporate  
Other  
Employee  
Government  
Fleet  
Truck  
Rideshare  
Walk-in

## 24.2 Validation

Any value selected is valid.

## 24.3 Business Exceptions

None identified at this time.

## 24.4 System Exceptions

None identified at this time.

## 25. Billing Cycle Drop Down

### 25.1 Behavior

This area will initially default to the billing cycle associated with the Account and Rate Plan selected. It may be changed to another value.  
Drop down domain values are Blank, 24 Hour and Calendar Day.

### 25.2 Validation

None identified at this time.

### 25.3 Business Exceptions

See list in account name area for defaults, based on account.

### 25.4 System Exceptions

None identified at this time

## 26. Car Class to Charge for Drop Down

### 26.1 Behavior

This area will be a drop down list that also allows entry of alphanumeric values. The drop down list will be comprised of the most commonly used car classes. The entry of alphanumeric values will be edited against a larger more comprehensive car class list. If there is a successful vehicle/unit search, this will be populated with that particular vehicle's car class. It is possible to

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change this value.

Drop down list values

## Class and Type

ECAR  
CCAR  
ICAR  
SCAR  
FCAR  
PCAR  
LCAR  
MVAR  
XFAR  
XPAR  
XXAR  
XVAR

### 26.2 Validation

None identified at this time.

### 26.3 Business Exceptions

If the values entered are not one of the ones listed below, a message is displayed "Must enter a valid car class".

Car Class Edit List of Values

## Class and Type

MCAR  
MBAR  
MDAR  
MXAR  
MSAR  
MTAR  
MWAR  
MVAR  
MFAR  
MPAR  
ECAR  
EBAR  
EDAR  
EXAR  
ESAR



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ETAR  
EWAR  
EVAR  
EFAR  
EPAR  
CCAR  
CBAR  
CDAR  
CXAR  
CSAR  
CTAR  
CWAR  
CVAR  
CFAR  
CPAR  
ICAR  
IBAR  
IDAR  
IXAR  
ISAR  
ITAR  
IWAR  
IVAR  
IFAR  
IPAR  
SCAR  
SBAR  
SDAR  
SXAR  
SSAR  
STAR  
SWAR  
SVAR  
SFAR  
SPAR  
FCAR  
FBAR  
FDAR  
FXAR  
FSAR  
FTAR  
FWAR  
FVAR

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FFAR  
FPAR  
PCAR  
PBAR  
PDAR  
PXAR  
PSAR  
PTAR  
PWAR  
PVAR  
PFAR  
PPAR  
LCAR  
LBAR  
LDAR  
LXAR  
LSAR  
LTAR  
LWAR  
LVAR  
LFAR  
LPAR  
XCAR  
XBAR  
XDAR  
XXAR  
XSAR  
XTAR  
XWAR  
XVAR  
XFAR  
XPAR

## 26.4 System Exceptions

None identified at this time.

## 27. Unit/Vehicle Input Search Area

### 27.1 Behavior

This will be an alphanumeric input area, consisting of 3 areas. The Unit Number, the License Number and the last 6 Digits of the Vehicle Identification Number, (VIN).

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The Unit Number must be entered, with at least one of the other two. Using this information, the system will be able to determine the associated car class, for the rate source selected. If there is only a single rate plan associated with the car class and rate source then the system will return rates for that particular unit/vehicle and the rates associated with all applicable coverages, PAI, CDW and SLP.

If there is more than one rate plan associated with the rate source, then the system will display all rate plans determined by the car class and allow the user to select a single rate plan. After a single rate plan is selected, then the system will return rates for that particular unit/vehicle and the rates associated with all applicable coverages, PAI, CDW and SLP.

At a minimum, we will need to return the associated Unit Number, Year, Make, Model and Car Class of the different vehicles. This information will need to be saved with the transaction also. It will also be displayed within the unit information box when retrieved. The search will initiate when the user tabs off of the last field.

## 27.2 Validation

None identified at this time.

## 27.3 Business Exceptions

If the unit/vehicle selected belong to a car class, which is not associated with a rate plan for the designated rate source, then a message is displayed "Rate plan does not contain selected car class".

If the user has not entered one of the required fields, display a message "Unit number and license plate number or last 6 of VIN required."

## 27.4 System Exceptions

None identified at this time.

At a minimum, we will need to return the associated Unit Number, Year, Make, Model and Car Class of the different vehicles. This information will need to be saved with the transaction also.

## 28. Units Available Search Button Function

### 28.1 Behavior

Selecting this button will display the Units available search pop-up panel.

The pop-up box will display:

Group and branch drop down boxes.

Unit number, License plate number and Last 6 of VIN input areas.

A search function which will execute the search

A display of the vehicles available table with columns:

Year, Make, Model, Series, Car Class, License Plate Number and Location.

The Group and Branch drop down boxes will default to the terminal location.

The Unit Number, License Plate Number and Last 6 of VIN, will default to blank. Any one, two or all three

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may be used to search the Vehicle Data base.

The vehicles available display will default display the available units at the terminal location default group and branch.

## 28.2 Validation

None identified at this time.

## 28.3 Business Exceptions

There must be at least one search criteria to execute a search, otherwise display a message "Must specify at least one search criteria".

## 28.4 System Exceptions

None identified at this time.

## 29. Get Rates Button

### 29.1 Behavior

Selection of this button will have the system execute a search for rate plans associated with the information entered.

### 29.2 Validation

None identified at this time.

### 29.3 Business Exceptions

At a minimum there must be an Account Name or an Account Number to search for rates. If the user selects this button without one of these a message is displayed "Must specify account name or number".

### 29.4 System Exceptions

None identified at this time.

## 30. Rate Plan – Pop-Up Display Area

### 30.1 Behavior

This is a pop-up window that will display the rates of a rate plan associated with an Account. Information displayed is:

Rate pop-up box columns and information:

- Car Class
- Daily – Rate and Mileage
- Weekly – Rate and Mileage
- Monthly – Rate and Mileage
- Hourly - Rate
- Mileage Charge

Car class will have a hyper-link which will allow the user to select the rate they want. This will then populate the rates display area on the Dates and Rates panel.

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## 30.2 Validation

None identified at this time.

## 30.3 Business Exceptions

If an Account has more than one rate plan associated with it, then this information cannot be displayed until the Rate Plan area has a value.

If an Account has a single rate plan associated with it, then this information is displayed after the Account Name is selected or an Account Number is entered.

If an Account has a single rate plan and there is a value in the Car Class area, and that car class is in the rate plan, then the rates display area of the Dates and Rates panel is populated with the appropriate information and the rate plan pop-up window is NOT displayed.

If an Account has multiple rate plans and there is a value in the Car Class area, and there is not a value in Rate Plan area, a message should display "Must specify a rate plan".

If an Account has a multiple rate plans, and there is a value in the Rate Plan area and there is a value in the Car Class area, and that car class is in the rate plan, then the rates display area of the Dates and Rates panel is populated with the appropriate information and the rate plan pop-up window is NOT displayed.

If an Account has a single rate plans, and there is a value in the Car Class area, but that car class is not in the rate plan, then a message is displayed, "Rate plan does not contain selected car class".

If an Account has a multiple rate plans, and there is a value in the Rate Plan area and there is a value in the Car Class area, but that car class is not in the rate plan, then a message is displayed "No rates found for car class selected".

## 30.4 System Exceptions

None identified at this time

## 31. Rate Plan – Display Area

### 31.1 Behavior

This is a display area that will be populated with the rates associated with a particular car class of a rate plan associated with an Account.

Information displayed is:

- Car Class

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- Daily Rate
- Daily Mileage
- Weekly Rate
- Weekly Mileage
- Monthly Rate
- Monthly Mileage
- Hourly Rate
- Mileage Charge
- No Charge Check Box

All of the information presented, except Car Class, has the ability to be edited or changed.

There is an interaction between the Mileage Charge and the No Charge Check Box. If the No Charge Check Box is selected, then the Mileage Charge is set to zero and the area disabled. Unselecting the No Charge Check Box will enable the Mile Charge area for entering values.

## 31.2 Validation

None identified at this time.

## 31.3 Business Exceptions

Negative values may not be entered. If attempted, display message "Must specify positive amount".

## 31.4 System Exceptions

None identified at this time

## 32. Coverages Area

### 32.1 Behavior

This will be a collapsible/expandable area to display the different coverages. There will be some sort of button functionality which will allow this area to be expanded or collapsed. In either state the selected coverages will be listed to the side of the button function. Values within area may be changed or edited.

Each area will have a drop-down box to be able to select additional items.

It is anticipated that the information to be displayed for each instance of the coverage is:

- Description
- Rate
- Rate Frequency
- Start Date
- Start Time
- End Date
- End Time

All of this information will come from what is maintained in the Perot systems.

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## 32.2 Validation

None identified at this time.

## 32.3 Business Exceptions

Negative values may not be entered in the rate area. If attempted, display message "Must specify positive amount".

Dates may be changed, but cannot be beyond the Pick-up and/or Return date range. If this is attempted, display appropriate message, either "Start date cannot be before pick-up date" or "End date cannot be after return date".

Similarly, Times may be changed, but cannot be beyond the Pick-up and/or Return time range. If this is attempted, display appropriate message, either "Start time cannot be before pick-up time" or "End time cannot be after return time".

## 32.4 System Exceptions

None identified at this time.

## 33. Coverages - CDW Area

### 33.1 Behavior

This area will initially default to the amount of Collision Damage Waiver associated with the Car Class and Rate Plan for the particular Account. This area may be changed or edited.

Each area will have a drop-down box to be able to select additional items.

### 33.2 Validation

None identified at this time.

### 33.3 Business Exceptions

Negative values may not be entered in the rate area. If attempted, display message "Must specify positive amount".

Dates may be changed, but cannot be beyond the Pick-up and/or Return date range. If this is attempted, display appropriate message, either "Start date cannot be before pick-up date" or "End date cannot be after return date".

Similarly, Times may be changed, but cannot be beyond the Pick-up and/or Return time range. If this is attempted, display appropriate message, either "Start time cannot be before pick-up time" or "End time cannot be after return time".

### 33.4 System Exceptions

None identified at this time

## 34. Coverages - PAI Area

### 34.1 Behavior

This area will initially default to the amount of Personal Accident Insurance associated with the Car Class and Rate Plan for the particular Account. This area may be changed or edited.

Each area will have a drop-down box to be able to select additional items.

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## 34.2 Validation

None identified at this time.

## 34.3 Business Exceptions

Negative values may not be entered in the rate area. If attempted, display message "Must specify positive amount".

Dates may be changed, but cannot be beyond the Pick-up and/or Return date range. If this is attempted, display appropriate message, either "Start date cannot be before pick-up date" or "End date cannot be after return date".

Similarly, Times may be changed, but cannot be beyond the Pick-up and/or Return time range. If this is attempted, display appropriate message, either "Start time cannot be before pick-up time" or "End time cannot be after return time".

## 34.4 System Exceptions

None identified at this time

## 35. Coverages - SLP Area

### 35.1 Behavior

This area will initially default to the amount of Supplemental Liability Protection associated with the Car Class and Rate Plan for the particular Account. This area may be changed or edited. Each area will have a drop-down box to be able to select additional items.

### 35.2 Validation

None identified at this time.

### 35.3 Business Exceptions

Negative values may not be entered in the rate area. If attempted, display message "Must specify positive amount".

Dates may be changed, but cannot be beyond the Pick-up and/or Return date range. If this is attempted, display appropriate message, either "Start date cannot be before pick-up date" or "End date cannot be after return date".

Similarly, Times may be changed, but cannot be beyond the Pick-up and/or Return time range. If this is attempted, display appropriate message, either "Start time cannot be before pick-up time" or "End time cannot be after return time".

### 35.4 System Exceptions

None identified at this time.

## 36. Cancel Function Button

### 36.1 Behavior

The Cancel image/button will take the user to the last panel accessed.



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## 36.2 Validation

None identified at this time.

## 36.3 Business Exceptions

None identified at this time.

## 36.4 System Exceptions

None identified at this time.

## General Requirements

### 37. Error Message - Session Already Exists for this Browser Instance

This captures the Error Message generated when the user attempts to open a new session on the terminal without opening a new instance of the IE browser.

#### 37.1 Behavior

When the user attempts to open a new session on the same terminal without opening a new instance of the browser, display the following error message: #

“There is a session already open for this browser on this terminal.  
Please use that session or open a new browser.”

For Informational purposes: This situation can occur when the user attempts to open the active session by selecting the window titled “About” and uses the “back” button to navigate to the previous page.

## 38. Security

The user must have the appropriate security level to access these screens. The user is allowed to view or print anything. It is when they attempt to edit a reservation that their security restrictions will be enforced.

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# Enterprise Rent-A-Car

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## Rental Redesign/ECARS 2.0 Screen Action Specification: Vehicle / Shop

Version 2.7

Rental Redesign	Version: 2.7
Screen Action Specification	Date: 12/21/2001
Vehicle / Shop	

## Revision History

Date	Version	Description	Author
08/03/2001	1.0	Created document	Chris Carr
08/07/2001	1.1	Updated document with revised screen shots and verbiage	Chris Carr
08/10/2001	1.2	Updated document to reflect Use Case changes	Chris Carr
08/13/2001	1.3	Clarification of Contact Last Name and/or Contact First Name. Added info relating to System generated Notes.	Chris Carr
08/14/2001	1.4	Added info for European Branch Short list	Chris Carr
08/16/2001	1.5	<ul style="list-style-type: none"> <li>Changed text in 4.5.1 to "... Account's phone number."</li> <li>Changed text in 4.5.2 to "Entered data should be 10 digits for US to include area code or appropriate format for other countries."</li> <li>Phone number is pre-populated with value from selected Account.</li> <li>Changing Account name will update the Account number and vice versa.</li> <li>When "Theft" is selected, Theft Waiver Days (3.14) is no longer a required field.</li> <li>If a value other than (Blank) is selected for Theft Waiver Days (3.14), the Date of Loss (3.12) field is then required.</li> </ul>	Chris Carr
08/20/2001	1.6	Renamed document to Vehicle/Shop.	Chris Carr
08/24/2001	1.7	Added Country code to Not on File.	Chris Carr
08/30/2001	1.8	<ul style="list-style-type: none"> <li>Added screen shots for the United Kingdom, Ireland and Germany versions.</li> <li>Added screen shot for Germany's Schwakeliste.</li> <li>Made changes to the order of text descriptions of the fields to reflect the new order presented in the screen shots of the Vehicle/Shop screen.</li> <li>License Plate Number will no longer be displayed for North America.</li> <li>License Plate Number will be displayed as Registration Number for all of the European countries.</li> <li>Removed the requirement of Date of Loss if a Theft Waiver Days value is selected.</li> </ul>	Chris Carr

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		<ul style="list-style-type: none"> <li>Removed the "and/or" requirement for Contact Last Name and Contact First Name. Only the Last Name is now required.</li> <li>Added a new section for the text description of the Schwakeliste fields.</li> </ul>	
09/04/2001	1.9	<ul style="list-style-type: none"> <li>Year will not be displayed for Ireland.</li> <li>Schwakeliste pop-up is no longer required.</li> <li>System note needs to be generated for registration number and class.</li> </ul>	Chris Carr
09/06/2001	2.0	Put in changes for Class now being a drop down selection field.	Chris Carr
09/06/2001	2.1	Updated with changes from Reservation	James Atteberry
09/12/2001	2.2	Updated with new screen shots containing new navigation areas.	Chris Carr
09/21/2001	2.3	<ul style="list-style-type: none"> <li>Expanded sys-gen note for Vehicle Year/Make/Model changed to 3 separate notes.</li> <li>Reinstated the "and/or" requirement for Contact Last Name and First Name.</li> </ul>	Chris Carr
10/12/2001	2.4	Updated with new screen shots.	Chris Carr
10/23/2001	2.5	<ul style="list-style-type: none"> <li>Updated with new screen shots and verbiage that reflect the change of the "Add Contact" button to now say "New Contact".</li> <li>Changed system notes for "Not on File" to reflect what was developed.</li> </ul>	Chris Carr
10/30/2001	2.6	Added verbiage stating that blanking out the Account name/number will then cause the Account number/name and Contact to also be blanked out.	Chris Carr
11/13/2001	2.7	<ul style="list-style-type: none"> <li>Changed theft waiver days from "One Day", "Two Days", "Three Days" to "1 Day", "2 Days" and "3 Days".</li> <li>Added system generated notes for Other Make and Other Model.</li> </ul>	Chris Carr

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6.1	Year, Make and Model domain values come from the database.....	25
6.2	A Contact must be selected for every Account that is selected as a Shop. ....	25
6.3	The system should not search for or display any deactivated Accounts. ....	25
6.4	User needs to have ability to cancel a search at any time during the search. ....	25
6.5	Notes should be generated when any of the following events occur: .....	26
7.	Security .....	27

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Vehicle / Shop	

## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Vehicle / Shop screen.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Screen Prints

**Vehicle / Shop - Microsoft Internet Explorer provided by Enterprise Rent-a-Car**

File Edit View Favorites Tools Help

Address Y:\APPS\Ecars\_20\Development Projects\HTML\Open Ticket\Shop\RentersVehicle&Shop.html

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Renter's Vehicle** - Options - Go X

**Vehicle**

Year [dropdown]  
Make [dropdown] Other Make [text]  
Model [dropdown] Other Model [text]  
Color [dropdown] Other Color [text]

**Loss Information**

Is Car [dropdown] Type of Loss [dropdown]  
Total Loss? [dropdown] Date of Loss [calendar]  
Theft Waiver Days [dropdown]

**Vehicle Notes**

**Shop**

Shop [dropdown]  
Account Name [dropdown] Account Number [text] Account Search Not on File  
Contact Name [dropdown] New Contact Phone Number [text]

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

Done Local intranet

Figure 1 – Vehicle / Shop (North America)

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Vehicle / Shop - Ireland and United Kingdom - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Address Y:\APPS\Ecars\_20\Development Projects\HTML\Open Ticket\Shop\Vehicle&Shop-IrelandUK.html

Reservation Contracts Callbacks

**DRIVERS**  
Driver summary 1  
Driver summary 2  
**REFERRAL**  
Referral sum 1  
Referral sum 2  
**DATES/RATES**  
Dates summary 1  
Dates summary 2  
**BILL-TO**  
Bill-To summary 1  
Bill-To summary 2  
**VEHICLE/SHOP**  
Vehicle/Shop 1  
Vehicle/Shop 2  
**NOTES**  
Notes summary 1  
Notes summary 2

**Renter's Vehicle** - Options - Go X

Vehicle  
Registration Number

Make  

Other Make

Model  

Other Model

Color  

Other Color

Loss Information  
Is Car Drivable?   
Type of Loss   
Total Loss?   
Date of Loss

Vehicle Notes

**Shop**  
Shop  
Account Name  Account Number   
   
Contact Name  Phone Number

Figure 2 – Vehicle / Shop (Ireland & United Kingdom)



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Vehicle / Shop - Germany - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Address Y:\APPS\Ecars\_20\Development Projects\HTML\Open Ticket\Shop\Vehicle&Shop-Germany.html

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Renter's Vehicle** - Options - Go

Vehicle  
Registration Number

Year Class

Make Other Make

Model Other Model

Color Other Color

**Loss Information**

Is Car  
Drivable? Type of Loss

Total Loss? Date of Loss

**Vehicle Notes**

**Shop**

Shop  
Account Name Account Number Account Search Not on File

Contact Name New Contact Phone Number

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

Done Local intranet

Figure 3 – Vehicle / Shop (Germany)

Rental Redesign	Version: 2.7
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Vehicle / Shop	

Vehicle / Shop - Germany - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Address Y:\APPS\Ecars\_20\Development Projects\HTML\Open Ticket\Shop\Vehicle&Shop-Germany.html

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Renter's Vehicle** - Options - Go

Vehicle

Registration Number

Year

Make

Model

Color

**Shop**

Shop

Account Name

Contact Name

Not on File

Name\*

Address\*

Zip\*

Country\*

City\*

State\*

Phone Number\*

Contact Last Name

Contact First Name

OK Cancel

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

keycode=18 Local intranet

Figure 4 – Add Account Not on File

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Vehicle / Shop	

Vehicle / Shop - Germany - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Address Y:\APPS\Ecars\_20\Development Projects\HTML\Open Ticket\Shop\Vehicle&Shop-Germany.html

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Renter's Vehicle** - Options - Go X

Vehicle

Registration Number

Year

Class

Make

Other Make

Model

Other Model

Color

Loss Information

Is Car

Drivable?

Type of Loss

Total Loss?

Date of Loss

**New Contact**

Last Name:

First Name:

Account Name

Contact Name

OK Cancel

New Contact

Not on File

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

keycode=9 Local intranet

Figure 5 – New Contact

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### **3. Vehicle / Shop (Figure 1, Figure 2, Figure 3)**

#### **3.1 Registration Number (Vehicle area of Renter's Vehicle sub-screen)**

##### **3.1.1 Behavior**

This is a text field in which the user may enter a Registration Number. This field only appears on the European versions (Figure 2, Figure 3) of the application and is hidden on the North American version (Figure 1).

##### **3.1.2 Validation**

No validation is necessary.

##### **3.1.3 Business Exceptions**

None have been identified at this time.

##### **3.1.4 System Exceptions**

None have been identified at this time.

#### **3.2 Year (Vehicle area of Renter's Vehicle sub-screen)**

##### **3.2.1 Behavior**

This is a drop-down field containing the Years available for searching. This field is hidden on the Ireland and United Kingdom version (Figure 2) of the application and is visible on the North American and German versions (Figure 1, Figure 3).

##### **3.2.2 Validation**

No validation is necessary.

##### **3.2.3 Business Exceptions**

None have been identified at this time.

##### **3.2.4 System Exceptions**

None have been identified at this time.

#### **3.3 Class (Vehicle area of Renter's Vehicle sub-screen)**

##### **3.3.1 Behavior**

This is a drop-down field containing a list of numbers from 1 to 10 for the User to select as the Class. This field only appears on the German version (Figure 3) of the application and is hidden on the North American and the Ireland and United Kingdom versions (Figure 1, Figure 2).

##### **3.3.2 Validation**

No validation is necessary.

##### **3.3.3 Business Exceptions**

None have been identified at this time.

##### **3.3.4 System Exceptions**

None have been identified at this time.

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### **3.4 Make (Vehicle area of Renter's Vehicle sub-screen)**

#### **3.4.1 Behavior**

This is a drop-down field containing a list of makes available for the Year (3.2) selected. If a Make different from "Other Make" is selected from the list, the Other Make (3.5) field should be cleared out. This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.4.2 Validation**

No validation is necessary.

#### **3.4.3 Business Exceptions**

None have been identified at this time.

#### **3.4.4 System Exceptions**

None have been identified at this time.

### **3.5 Other Make (Vehicle area of Renter's Vehicle sub-screen)**

#### **3.5.1 Behavior**

This is a text field in which the user may enter a Make that was not available in the drop-down. If a value is entered, the Make (3.4) drop-down field should be cleared out if it has a value different from "Other Make". This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.5.2 Validation**

No validation is necessary.

#### **3.5.3 Business Exceptions**

None have been identified at this time.

#### **3.5.4 System Exceptions**

None have been identified at this time.

### **3.6 Model (Vehicle area of Renter's Vehicle sub-screen)**

#### **3.6.1 Behavior**

This is a drop-down field containing a list of models available for the Make (3.4) selected. If a Model different from "Other Model" is selected from the list, the Other Model (3.7) field should be cleared out. This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.6.2 Validation**

No validation is necessary.

#### **3.6.3 Business Exceptions**

None have been identified at this time.

#### **3.6.4 System Exceptions**

None have been identified at this time.

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### **3.7 Other Model (Vehicle area of Renter's Vehicle sub-screen)**

#### **3.7.1 Behavior**

This is a text field in which the user may enter a Model that was not available in the drop-down. If a value is entered, the Model (3.6) drop-down field should be cleared out if it has a value different from "Other Model". This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.7.2 Validation**

No validation is necessary.

#### **3.7.3 Business Exceptions**

None have been identified at this time.

#### **3.7.4 System Exceptions**

None have been identified at this time.

### **3.8 Color (Vehicle area of Renter's Vehicle sub-screen)**

#### **3.8.1 Behavior**

This is a drop-down field containing a list of available colors. If a Color different from "Other Color" is selected from the list, the Other Color (3.9) field should be cleared out. This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.8.2 Validation**

No validation is necessary.

#### **3.8.3 Business Exceptions**

None have been identified at this time.

#### **3.8.4 System Exceptions**

None have been identified at this time.

### **3.9 Other Color (Vehicle area of Renter's Vehicle sub-screen)**

#### **3.9.1 Behavior**

This is a text field in which the user may enter a Color that was not available in the drop-down. If a value is entered, the Color (3.8) drop-down field should be cleared out if it has a value different from "Other Color". This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.9.2 Validation**

No validation is necessary.

#### **3.9.3 Business Exceptions**

None have been identified at this time.

#### **3.9.4 System Exceptions**

None have been identified at this time.

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### **3.10 Is Car Drivable? (Loss Information area of Renter's Vehicle sub-screen)**

#### **3.10.1 Behavior**

This is a drop down field containing the following domain values:

- (Blank) - Default
- Yes
- No

This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.10.2 Validation**

No validation is necessary.

#### **3.10.3 Business Exceptions**

None have been identified at this time.

#### **3.10.4 System Exceptions**

None have been identified at this time.

### **3.11 Type of Loss? (Loss Information area of Renter's Vehicle sub-screen)**

#### **3.11.1 Behavior**

This is a drop down field containing the following domain values:

- (Blank) - Default
- Damage
- Theft

This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.11.2 Validation**

No validation is necessary.

#### **3.11.3 Business Exceptions**

None have been identified at this time.

#### **3.11.4 System Exceptions**

None have been identified at this time.

### **3.12 Total Loss? (Loss Information area of Renter's Vehicle sub-screen)**

#### **3.12.1 Behavior**

This is a drop down field containing the following domain values:

- (Blank) - Default
- Yes
- No

This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.12.2 Validation**

No validation is necessary.

#### **3.12.3 Business Exceptions**

None have been identified at this time.

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#### 3.12.4 *System Exceptions*

None have been identified at this time.

### 3.13 **Date of Loss (Loss Information area of Renter's Vehicle sub-screen)**

#### 3.13.1 *Behavior*

This is a text field in which the user may enter a date value. This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### 3.13.2 *Validation*

Entered data should be in a MM/DD/YYYY format.

#### 3.13.3 *Business Exceptions*

None have been identified at this time.

#### 3.13.4 *System Exceptions*

None have been identified at this time.

### 3.14 **Calendar button (Loss Information area of Renter's Vehicle sub-screen)**

#### 3.14.1 *Behavior*

This will bring up a calendar pop-up window allowing the user to select a specific date. The selected date will fill the Date of Loss (3.13) field. This button appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### 3.14.2 *Validation*

No validation is necessary.

#### 3.14.3 *Business Exceptions*

None have been identified at this time.

#### 3.14.4 *System Exceptions*

None have been identified at this time.

### 3.15 **Theft Waiver Days (Loss Information area of Renter's Vehicle sub-screen)**

#### 3.15.1 *Behavior*

This is a drop down field containing the following domain values:

- (Blank) - Default
- 1 Day
- 2 Days
- 3 Days

This field only appears on the North American version (Figure 1) of the application and is hidden on the European versions (Figure 2, Figure 3).

#### 3.15.2 *Validation*

No validation is necessary.

#### 3.15.3 *Business Exceptions*

None have been identified at this time.



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#### 3.15.4 System Exceptions

None have been identified at this time.

### 3.16 Vehicle Notes (Renter's Vehicle sub-screen)

#### 3.16.1 Behavior

This is a free form text field in which the user may enter data. The information entered here is only visible from this screen. This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### 3.16.2 Validation

No validation is necessary.

#### 3.16.3 Business Exceptions

None have been identified at this time.

#### 3.16.4 System Exceptions

None have been identified at this time.

### 3.17 Account Name (Shop sub-screen)

#### 3.17.1 Behavior

This field's value is entered when:

- User enters the Account name.
- User clicks the "down arrow" button (3.18) to the immediate right and selects an Account from the Branch Short list.
- User enters a valid number in the Account Number (3.19) field. That number's Account name value will then populate this field.
- User clicks the "Search" button (3.20) and selects an Account from the Account Information list.
- User clicks the "Not on File" button (3.21) and enters the appropriate new Account information.

If an Account name is entered, the Account Number (3.19), Contact Name (3.22) and Phone Number (3.25) fields will then be populated. If the Account name is blanked out and the user tabs off or leaves the field, Account Number (3.19) and Contact (3.22) will also be blanked out. This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### 3.17.2 Validation

No validation is necessary.

#### 3.17.3 Business Exceptions

None have been identified at this time.

#### 3.17.4 System Exceptions

None have been identified at this time.

### 3.18 Down arrow button (Shop sub-screen)

#### 3.18.1 Behavior

This will bring up the Branch Short list allowing the user to select a specific Account. If in Europe, the European Branch Short list will be brought up. If an Account is selected,

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the Account Name (3.17), Account Number (3.19), Contact Name (3.22) and Phone Number (3.25) fields will then be populated. This button appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

### 3.18.2 Validation

No validation is necessary.

### 3.18.3 Business Exceptions

None have been identified at this time.

### 3.18.4 System Exceptions

None have been identified at this time.

## 3.19 Account Number (Shop sub-screen)

### 3.19.1 Behavior

This field's value is entered when:

- User enters a valid name in the Account Name (3.17) field. That name's Account number value will then populate this field.
- User clicks the "down arrow" button (3.18) to the immediate left and selects an Account from the Branch Short list.
- User enters the Account number.
- User clicks the "Search" button (3.20) and selects an Account from the Account Information list.
- User clicks the "Not on File" button (3.21) and enters the appropriate new Account information.

If an Account number is entered, the Account Name (3.17), Contact Name (3.22) and Phone Number (3.25) fields will then be populated. If the Account number is blanked out and the user tabs off or leaves the field, Account Name (3.17) and Contact (3.22) will also be blanked out. This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

### 3.19.2 Validation

No validation is necessary.

### 3.19.3 Business Exceptions

None have been identified at this time.

### 3.19.4 System Exceptions

None have been identified at this time.

## 3.20 Search button (Shop sub-screen)

### 3.20.1 Behavior

This will bring up the Account Search screen allowing the user to search for and then select a specific Account. If an Account is selected, the Account Name (3.17), Account Number (3.19), Contact Name (3.22) and Phone Number (3.25) fields will then be populated. This button appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

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### 3.20.2 Validation

No validation is necessary.

### 3.20.3 Business Exceptions

None have been identified at this time.

### 3.20.4 System Exceptions

None have been identified at this time.

## 3.21 Not on File button (Shop sub-screen)

### 3.21.1 Behavior

This will bring up the Add Account Not on File screen (Figure 4) allowing the user to enter information for a new Account. After all the necessary fields on that screen are entered, the Account Name (3.17), Account Number (3.19), Contact Name (3.22) and Phone Number (3.25) fields will then be populated with that screen's entered information. This button appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

### 3.21.2 Validation

No validation is necessary.

### 3.21.3 Business Exceptions

None have been identified at this time.

### 3.21.4 System Exceptions

None have been identified at this time.

## 3.22 Contact Name (Shop sub-screen)

### 3.22.1 Behavior

This field's value is entered when:

- User enters a valid name in the Account Name (3.17) field. That name's Contact name value will then populate this field.
- User clicks the "down arrow" button (3.18) to the immediate right of Account Name (3.17) and selects an Account from the Branch Short list. That Account's Contact name value will then populate this field's value.
- User enters a valid number in the Account Number (3.19) field. That number's Contact name value will then populate this field.
- User clicks the "Search" button (3.20) and selects an Account from the Account Information list. That Account's Contact name value will then populate this field's value.
- User clicks the "Not on File" button (3.21) and enters the appropriate new Contact information after the new Account information. After all the necessary fields on that screen are entered, that screen's entered information for Contact name will then populate this field's value.
- User enters the Contact name.
- User clicks the "down arrow" button (3.23) to the immediate right and selects a Contact from the Contact list.

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- User clicks the “Add New” button (3.24) and enters the appropriate new Contact information.

This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### 3.22.2 Validation

No validation is necessary.

#### 3.22.3 Business Exceptions

None have been identified at this time.

#### 3.22.4 System Exceptions

None have been identified at this time.

### 3.23 Down arrow button (Shop sub-screen)

#### 3.23.1 Behavior

This will bring up the Contact list allowing the user to select a specific Contact. If a Contact is selected, the Contact Name (3.22) field will then be populated. This button appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### 3.23.2 Validation

No validation is necessary.

#### 3.23.3 Business Exceptions

None have been identified at this time.

#### 3.23.4 System Exceptions

None have been identified at this time.

### 3.24 New Contact button (Shop sub-screen)

#### 3.24.1 Behavior

This will bring up the New Contact screen (Figure 5) allowing the user to enter information for a new Contact.

After the necessary field(s) on that screen is/are entered, the Contact Name (3.22) field will then be populated with that screen’s entered information. This button appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### 3.24.2 Validation

No validation is necessary.

#### 3.24.3 Business Exceptions

None have been identified at this time.

#### 3.24.4 System Exceptions

None have been identified at this time.

### 3.25 Phone Number (Shop sub-screen)

#### 3.25.1 Behavior

This field’s value is entered when:

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- User enters a valid name in the Account Name (3.17) field. That name's Phone number value will then populate this field.
- User clicks the "down arrow" button (3.18) to the immediate right of Account Name (3.17) and selects an Account from the Branch Short list. That Account's Phone number value will then populate this field's value.
- User enters a valid number in the Account Number (3.19) field. That number's Phone number value will then populate this field.
- User clicks the "Search" button (3.20) and selects an Account from the Account Information list. That Account's Phone number value will then populate this field's value.
- User clicks the "Not on File" button (3.21) and enters the appropriate new Account information. That Account's Phone number value will then populate this field's value.
- User enters the Phone number.

This button appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

### 3.25.2 Validation

No validation is necessary.

### 3.25.3 Business Exceptions

None have been identified at this time.

### 3.25.4 System Exceptions

None have been identified at this time.

## 3.26 Button Line Area

### 3.26.1 Behavior

The Previous button will take the user to the Bill-to screen within the same transaction.

The Next button will take the user to the Notes screen within the same transaction.

The Complete button will initiate a save of the transaction. All validations will be performed, returning any errors to the user. If there are no errors, the transaction is saved, and the user is returned to the Open Ticket home page.

## 4. Not on File (Figure 4)

### 4.1 Name

#### 4.1.1 Behavior

This is a text field in which the user may enter an Account name.

#### 4.1.2 Validation

No validation is necessary.

#### 4.1.3 Business Exceptions

None have been identified at this time.

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#### 4.1.4 *System Exceptions*

None have been identified at this time.

### 4.2 **Address**

#### 4.2.1 *Behavior*

This is a free form text field in which the user may enter an Account's address.

#### 4.2.2 *Validation*

No validation is necessary.

#### 4.2.3 *Business Exceptions*

None have been identified at this time.

#### 4.2.4 *System Exceptions*

None have been identified at this time.

### 4.3 **Zip**

#### 4.3.1 *Behavior*

This is a text field in which the user may enter an Account's zip code.

#### 4.3.2 *Validation*

No validation is necessary.

#### 4.3.3 *Business Exceptions*

None have been identified at this time.

#### 4.3.4 *System Exceptions*

None have been identified at this time.

### 4.4 **Geographic Framework button (lightening bolt graphic)**

#### 4.4.1 *Behavior*

This will fill in the City (4.6) and State (4.7) fields if there is only 1 city for the zip code. If more than 1 city is in the entered zip code, the Multiple Cities Found page will be brought up, allowing the user to select a city. The City (4.6) and State (4.7) fields will then be filled with the user's selection.

#### 4.4.2 *Validation*

No validation is necessary.

#### 4.4.3 *Business Exceptions*

None have been identified at this time.

#### 4.4.4 *System Exceptions*

None have been identified at this time.

### 4.5 **Country**

#### 4.5.1 *Behavior*

This is a drop down field containing the list of countries.

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#### 4.5.2 Validation

No validation is necessary.

#### 4.5.3 Business Exceptions

None have been identified at this time.

#### 4.5.4 System Exceptions

None have been identified at this time.

### 4.6 City

#### 4.6.1 Behavior

This is a text field in which the user may enter an Account's city. This field may also be filled by actions performed by the Geographic Framework button (4.4).

#### 4.6.2 Validation

No validation is necessary.

#### 4.6.3 Business Exceptions

None have been identified at this time.

#### 4.6.4 System Exceptions

None have been identified at this time.

### 4.7 State

#### 4.7.1 Behavior

This is a drop down field containing the list of states. This field may also be filled by actions performed by the Geographic Framework button (4.4).

#### 4.7.2 Validation

No validation is necessary.

#### 4.7.3 Business Exceptions

None have been identified at this time.

#### 4.7.4 System Exceptions

None have been identified at this time.

### 4.8 Phone

#### 4.8.1 Behavior

This is a text field in which the user may enter an Account's phone number.

#### 4.8.2 Validation

Entered data should be 10 digits for the US to include area code or the appropriate format for other countries.

#### 4.8.3 Business Exceptions

None have been identified at this time.

#### 4.8.4 System Exceptions

None have been identified at this time.

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Vehicle / Shop	

#### **4.9 Contact Last Name**

##### **4.9.1 Behavior**

This is a text field in which the user may enter a Contact's last name for the new Account.

##### **4.9.2 Validation**

No validation is necessary.

##### **4.9.3 Business Exceptions**

None have been identified at this time.

##### **4.9.4 System Exceptions**

None have been identified at this time.

#### **4.10 Contact First Name**

##### **4.10.1 Behavior**

This is a text field in which the user may enter a Contact's first name for the new Account.

##### **4.10.2 Validation**

No validation is necessary.

##### **4.10.3 Business Exceptions**

None have been identified at this time.

##### **4.10.4 System Exceptions**

None have been identified at this time.

#### **4.11 Button Line Area – Add Account Not on File**

##### **4.11.1 OK button**

###### **4.11.1.1 Behavior**

If data is not present in the required fields the feedback message explains that a value needs to be entered in the field(s) that is/are blank. Two options are presented, OK and Cancel. OK takes the user back to the Add Account Not on File screen for data entry; Cancel dismisses the Add Account Not on File screen. OK will be the default selection.

###### **4.11.1.2 Validation**

There must be data present in all fields except for Contact Last Name (4.9) and First Name (4.10) where only one needs to have data present.

###### **4.11.1.3 Business Exceptions**

None have been identified at this time.

###### **4.11.1.4 System Exceptions**

None have been identified at this time.



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#### 4.11.2 *Cancel button*

##### 4.11.2.1 *Behavior*

This button will dismiss the Add Account Not on File screen without saving any data.

##### 4.11.2.2 *Validation*

If data has been entered the following feedback message is displayed; "Are you sure you want to exit and lose the entered information?" Two options are presented, Yes and No. Yes will dismiss the screen and not save the data, No will take the user back to the Add Account Not on File screen.

The default button selection is "No".

##### 4.11.2.3 *Business Exceptions*

None have been identified at this time.

##### 4.11.2.4 *System Exceptions*

None have been identified at this time.

## 5. **New Contact (Figure 5)**

### 5.1 **Last Name**

#### 5.1.1 *Behavior*

This is a text field in which the user may enter a Contact's last name<sup>\*</sup> for an already selected Account.

#### 5.1.2 *Validation*

No validation is necessary.

#### 5.1.3 *Business Exceptions*

None have been identified at this time.

#### 5.1.4 *System Exceptions*

None have been identified at this time.

### 5.2 **First Name**

#### 5.2.1 *Behavior*

This is a text field in which the user may enter a Contact's first name for an already selected Account.

#### 5.2.2 *Validation*

No validation is necessary.

#### 5.2.3 *Business Exceptions*

None have been identified at this time.

#### 5.2.4 *System Exceptions*

None have been identified at this time.

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Vehicle / Shop	

### **5.3 Button Line Area – Add Contact**

#### **5.3.1 OK button**

##### **5.3.1.1 Behavior**

If data is not present in the Last Name (5.1) and/or the First Name (5.2) field(s), the feedback message explains that a value needs to be entered for Last Name (5.1) and/or First Name (5.2). Two options are presented, OK and Cancel. OK takes the user back to the Add Contact screen for data entry, Cancel dismisses the Add Contact screen. OK will be the default selection.

##### **5.3.1.2 Validation**

There must be data present in the Last Name (5.1) and/or First Name (5.2) field(s).

##### **5.3.1.3 Business Exceptions**

None have been identified at this time.

##### **5.3.1.4 System Exceptions**

None have been identified at this time.

#### **5.3.2 Cancel button**

##### **5.3.2.1 Behavior**

This button will dismiss the Add Contact screen without saving any<sup>s</sup> data.

##### **5.3.2.2 Validation**

If data has been entered the following feedback message is displayed; “Are you sure you want to exit and lose the entered information?” Two options are presented, Yes and No. Yes will dismiss the screen and not save the data, No will take the user back to the Add Contact screen. The default button selection is “No”.

##### **5.3.2.3 Business Exceptions**

None have been identified at this time.

##### **5.3.2.4 System Exceptions**

None have been identified at this time.

## **6. Rules**

**6.1 Year, Make and Model domain values come from the database.**

**6.2 A Contact must be selected for every Account that is selected as a Shop.**

**6.3 The system should not search for or display any deactivated Accounts.**

**6.4 User needs to have ability to cancel a search at any time during the search.**

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Vehicle / Shop	

**6.5 Notes should be generated when any of the following events occur:**

User adds a "Not on File" Shop	Shop [Blank] was changed to "XXXX"	Create/Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
User adds a "Not on File" Shop Contact	Not on File Contact "First Name Last Name" was added for Account "XXXXX"	Create/Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
User changes the Shop Account	Shop "XXXX" was changed to "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
User changes the Type of Loss	Type of Loss "XXXX" was changed to "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
User changes the "Total Loss?"	Total Loss "XXXX" was changed to "XXXX".	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
User changes the Date of Loss	Date of Loss "XXXXXX" was changed to "XXXXXX"	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
User changes number of Theft Waiver Days	Theft Waiver Days "X" was changed to "X"	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop (North America)
User changes the Registration Number	Registration Number "XXXX" was changed to "XXXX"	Edit	Edit	Vehicle/Shop (Ireland, UK, Germany)
User changes the Class	Class "XX" was changed to "XX"	Edit	Edit	Vehicle/Shop (Germany)
User changes the Renter's Vehicle's Year	The Renter's Vehicle Year "XXXX" was changed to Year "XXXX"	Edit	Edit	Vehicle/Shop
User changes the Renter's Vehicle's Make	The Renter's Vehicle Make "XXXX" was changed to Make "XXXX"	Edit	Edit	Vehicle/Shop
User changes the Renter's Vehicle's Model	The Renter's Vehicle Model "XXXX" was changed to Model "XXXX"	Edit	Edit	Vehicle/Shop
User changes the Renter's Vehicle Other	The Renter's Vehicle Other Make "XXXX" was changed to "XXXX"	Edit	Edit	Vehicle/Shop
User changes the Renter's Vehicle Other	The Renter's Vehicle Other Model "XXXX" was changed to "XXXX"	Edit	Edit	Vehicle/Shop

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## 7. Security

A user is authorized through a login process to create or edit a reservation or ticket.

<Company Name>

## Bill-to Screen Action Specification

## Revision History

Date	Version	Description	Author
04/12/2001	0.0	Created Template	Marty Tichy
08/06/2001	1.0	Created Document	Maribeth Concannon
08/30/2001	1.1	Updated to reflect changes from Navigation use case.	James Atteberry
10/08/2001	1.2	Replaced Account Search screen shot with the version that doesn't have print buttons.	Chris Carr
10/26/2001	1.3	Replaced main screen shot and updated the text to reflect the following changes: <ul style="list-style-type: none"><li>• removed "No of Days" field for Reservation only</li><li>• changed "Legacy Auth. Amount" label to "Green-screen ECARS Auth Amount"</li></ul>	Marty Tichy

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## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Bill to screen used in Reservation and Open.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Screen Prints

#### 2.1 Main Screen

Enterprise ECARS Application - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

Reservation Tickets Callbacks Vehicle Tools Help

DRIVERS Bill-To Options - Go X

SD VOID SDSDD

REFERRAL Bill-To

Account Name: testNmae Account Number: 999999 Search Not On File

DATES/RATES Contact Name: conlnam conlnam Phone Number: 5612561565 New Contact

BILL-TO Vehicle Authorization

testNmae Start Date Start Time End Date End Time

conlnam conlnam

VEHICLE/SHOP Daily Amount Tax Authorized By Rate List -Select- New Contact

NOTES Green-screen ECARS Auth Amount:

Notes Taken : 5 Status Claim Type Insured Name Claim/Pol/PO/RO

Maximum Information

Max Per Day Total Max Amount Max # Days Last Day

Previous Next

Res - 1216FC Res - 1216FD Res - 1216FB

## 2.2 Account Search

Account Search - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Address: Y:\APPS\Ecars\_20\Development Projects\HTML\Reservation\Referral\AccountSearch.html

Reservation Contracts Callbacks

### Account Search

Group:  
01 - St. Louis

Account Name Account Phone Number Account Type  
All

Search Reset Back

Account Name	Account Number	Account Type	Owning GP/BR	Account Address	City	State	Zip	Phone Numbers
A Collector's Bookstore**	GE1658	Corporate	0101	6275 Delmar	St. Louis	MO	63130	(314) 721-6127
Afri. Remodeling Co**	GE1225	Corporate	0102	312 Oak Pk. Village Dr.	Wildwood	MO	63040	636 458-1552
Accent Lincoln-mercury**	129498	Dealership	0103	9700 Manchester Rd	St. Louis	MO	63119	(314) 968-5300
Advantage Decorating**	GE0853	Corporate	0104	1601 North 7th St.	St. Louis	MO	63102	(314) 436-1419
African Amer. Rite Of Passage**	GE1538	Corporate	0105	325 Debaliviere	St. Louis	MO	63112	314 3612268
Ahzad Bogosian**	GE0830	Corporate	0106	7743 Arthur	St. Louis	MO	63117	(314) 645-3076
Alq-cs**	GE0238	Corporate	0107	120 S Central, Ste 300	St. Louis	MO	63105	(000) 000-0000
Al-pac, Inc.**	GE1350	Corporate	0108	18535 Old Hwy 66	Pacific	MO	63069	(636) 271-8222
Albertin Auto Body Inc**	G08868	Bodyshop	0109	8449 Page	St. Louis	MO	63130	(314) 423-

Items 1 - 66 of 66 found Prev 1 2 3 4 5 Next

Done Local intranet

### 2.3 Not on File

**Not on File**

Name:

Address:

Zip:

Phone:

City:

State:

Contact Last Name:

Contact First Name:

### 2.4 Add Contact

**Add Contact**

Last Name:

First Name:

## 2.5 Rates Table

Rates Table								
Car Class	Daily		Weekly		Monthly		Hourly	Mileage
	Rate	Mileage	Rate	Mileage	Rate	Mileage	Rate	Charge
CCAR	9.99	250	29.99	500	99.99	2500	2.99	0.25
ECAR	15.99	250	34.99	500	109.99	2500	3.99	0.25
FCAR	20.99	250	39.99	500	209.99	2500	4.99	0.25
SCAR	25.99	250	44.99	500	249.99	2500	5.99	0.25
Cancel								

## 3. Reservation Number

### 3.1 SUPLpending1.pending2 Behavior

This area shows the unique reservation number that has been assigned to the newly created reservation. The reservation number is 6 alphanumeric characters long. If another reservation is open, its reservation will be displayed in this area as well. The user will have the ability to have up to 3 reservations open at a time. A hyperlink will be available on the reservation numbers of the reservations that are NOT currently being displayed. For the reservation that is currently displayed, the reservation number will not have a hyperlink available. This is to allow the user to navigate between the open reservations.

### 3.2 Validation

None identified at this time.

### 3.3 SUPLpending1.pending5 Business Exceptions

If the user tries to open a 4<sup>th</sup> reservation, the system will display a message stating, "A maximum of 3 reservations may be displayed."

### 3.4 System Exceptions

None identified at this time.

## 4. Bill-to Title Bar Area

### 4.1 Behavior

The option area in the bill-to Title Bar will allow the user to access transaction-wide functions. These functions for Reservation are: -- Options --, Print, Void and Transfer. The default option is "--Options --". The user must press the Go button to initiate the selected function.

The Title bar Button area contains two buttons -- a Go button and a Close button.

The Go button is always active, and is used to initiate a function selected in the Options area. If the selected option is "--Options --" (the default), nothing should happen.

The Close button is always active and is used to close the current transaction. The button is labeled with an 'X'. Pressing this button will cause a confirmation popup to appear, asking the user if they wish to cancel the transaction and lose all changes. If the user selects 'No', they are returned to the Bill-to screen. If the user selects 'Yes', the transaction is closed with no changes saved to the database.



#### 4.2 Validation

None identified at this time.

#### 4.3 Business Exceptions

None identified at this time.

#### 4.4 System Exceptions

None identified at this time.

### 5. Button Line Area

#### 5.1 Behavior

The Previous button will take the user to the Dates/Rates screen within the same transaction.

The Next button will take the user to the Vehicle/Shop screen within the same transaction.

The Complete button will initiate a save of the transaction. All validations will be performed, returning any errors to the user. If there are no errors, the transaction is saved, and the user is returned to the Open Ticket home page.

#### 5.2 Validation

None identified at this time.

#### 5.3 Business Exceptions

None identified at this time.

#### 5.4 System Exceptions

None identified at this time.

### 6. Bill-to

#### 6.1 Account Name

This is a drop down which displays the "branch short list" of Account Names when the user hits the button beside it. Or, if the user begins to type anything in the field, a drop down will automatically appear and continue to position to the name most closely matching what has been typed.

Drop down. If the user selects an account not authorized to bill ("Source only") then the system presents message and user can make another selection or clear the field and use "Not on File."

##### 6.1.1 Business Exceptions

None.

##### 6.1.2 System Exceptions

None.

#### 6.2 Account Number

If the user has selected a name from the drop-down, the corresponding number should appear here.

Alternatively, the user can enter an Account number in this field.

Validation of the value in the field is performed when the user selects the "Search" button.

If the number isn't a valid account, then the system provides a message. If it is valid, but not billable, then the user can make another selection or clear the field and use "Not on File."

6.2.1 *Business Exceptions*

None.

6.2.2 *System Exceptions*

None.

6.3 **"Search" button**

If this button is used when an account number is in the "Account Number" field, then it validates the account number.

If not account number is present, then the "Account Search" screen is displayed.

In the first scenario above, if the account is not valid, a message is displayed. (See Referral Source for up-to-date functionality.)

6.3.1 *Business Exceptions*

None.

6.3.2 *System Exceptions*

None.

6.4 **"Not on File" Button**

Takes the user a screen to add a bill-to. This should also blank out the Account name and the Account number.

Upon returning from the panel, the name should be in the Account Name field and the Account Number should be blank.

6.4.1 *Validation*

None.

6.4.2 *Business Exceptions*

None.

6.4.3 *System Exceptions*

None.

6.5 **Contact Name**

This is a drop-down based on the account name selected above.

If not account name is selected, then the drop-down should be blank.

6.5.1 *Business Exceptions*

None.

6.5.2 *System Exceptions*

None.

## 6.6 "Add New" Button

This allows the user to add a contact to an account in the event that the name they're looking for is not present in the drop-down.

This pulls up a panel for the user to enter the first and or last name.

### 6.6.1 *Validation*

None.

### 6.6.2 *Business Exceptions*

None.

### 6.6.3 *System Exceptions*

None.

## 6.7 Phone Number

The user may add or update a number for the contact selected. This number is only saved on the contract.

Standard phone number formatting.

### 6.7.1 *Business Exceptions*

None.

### 6.7.2 *System Exceptions*

None.

## 6.8 Overall behavior

Once an account is selected (either by drop-down or by entering the number manually, the "Bill-to X" hyperlink is changed to the name of the account.

As a bill-to is added, the next "Bill-to X" is added to the list across the top, so as to allow the user to add another Bill-to. The maximum number of Bill-tos is four. This functionality will not be available for Reservation Pilot since only one bill-to is allowed.

## 7. Vehicle Authorization

### 7.1.1 Behavior

The start date should default to the open date and time of the ticket (either real for an open ticket, or projected, in the case of a reservation).

### 7.1.2 Validation

Standard date formatting.

Must be a date within the range of pickup date and return date.

Requires a status of "Authorized"

### 7.1.3 *Business Exceptions*

None.

### 7.1.4 *System Exceptions*

None.

## **7.2 Start Date Button**

### **7.2.1 Behavior**

Displays calendar for date selection

### **7.2.2 Validation**

Standard date calendar.

### **7.2.3 Business Exceptions**

None.

### **7.2.4 System Exceptions**

None.

## **7.3 Start Time**

### **7.3.1 Behavior**

If the ticket or reservation is 24 billing cycle, then the value defaults to the p/up time (if available) If no pickup time is available, the default value is 'blank'.

### **7.3.2 Validation**

This field is only valid for 24 hour billing. If the ticket is calendar day billing, the drop down should not work. If 24h billing, then the values are 15 minute increments around the clock.

### **7.3.3 Business Exceptions**

None.

### **7.3.4 System Exceptions**

None.

## **7.4 End Date**

### **7.4.1 Behavior**

The end date should default blank .

### **7.4.2 Validation**

Standard date formatting.

Must be a date which is equal to or after the Start Date.

Requires a status of "Authorized"

### **7.4.3 Business Exceptions**

None.

### **7.4.4 System Exceptions**

None.

## **7.5 End Date Button**

### **7.5.1 Behavior**

Displays calendar for date selection

7.5.2 Validation

Standard date calendar .

7.5.3 Business Exceptions

None.

7.5.4 System Exceptions

None.

7.6 End Time

7.6.1 Behavior

If the ticket or reservation is 24 billing cycle, then the value defaults to the same value as the start time

7.6.2 Validation

This field is only valid for 24 hour billing. If the ticket is calendar day billing, the drop down should not work. If 24h billing, then the values are 15 minute increments around the clock.

7.6.3 Business Exceptions

None.

7.6.4 System Exceptions

None.

7.7 No. of Days

7.7.1 Behavior

If the start date and end date are completed, this should be filled with the number of days authorized.  
**Removed for Reservation Pilot.**

7.7.2 Validation

Valid values are 0 and any integer.

If the user skips end date, the system will determine the date using this value in association with the start date.

7.7.3 Business Exceptions

None.

7.7.4 System Exceptions

None.

7.8 Daily Amount vs. Total Charges Toggle

7.8.1 Behavior

User selects one or the other.

If total charges, then leave daily amount field and tax field blank.

If the user elects to add information in to the daily amount field or the tax field and the "Total Charges" are selected, the system should change the toggle to the Daily Amount.

### 7.8.2 Validation

If daily (along with authorized status = "authorized"), then authorized amount, tax and authorized by are required.

If total charges (along with authorized status = "authorized"), then authorized by is required.

\*\*\*\*\*NOTE 4.8 will not be for Reservation Pilot. The users will not have the ability to choose total charges.

### 7.8.3 Business Exceptions

None.

### 7.8.4 System Exceptions

None.

## 7.9 Daily Amount Field

### 7.9.1 Behavior

If this field is changed by the user, the system should ensure that the toggle for "Daily Authorization" is selected.

This field can be filled in by the user, or by the "Rate List Button"

### 7.9.2 Validation

Alpha numeric

### 7.9.3 Business Exceptions

None.

### 7.9.4 System Exceptions

None.

## 7.10 Rate List Button

### 7.10.1 Behavior

Takes the user to a screen to pick a car class from the "Rates Table". The car class and all associated rates for the ticket are saved in the ticket, although it doesn't show on the screen. If the rate that is retrieved is tiered, then the rate from the first tier is put in the daily amount field and the tier flag is checked.

### 7.10.2 Validation

If the bill-to does not have negotiated rates in the system, this button will return nothing.

### 7.10.3 Business Exceptions

None.

### 7.10.4 System Exceptions

None.

## 7.11 Tier Flag

### 7.11.1 Behavior

System updated based on the criteria listed in the Rate List Button behavior.

7.11.2 *Validation*

None.

7.11.3 *Business Exceptions*

None.

7.11.4 *System Exceptions*

None.

7.12 **Tax**

7.12.1 *Behavior*

Drop down to indicate either "included" or "plus tax". Should default to "included."

7.12.2 *Validation*

This field is required with a daily authorization when the status is "authorized."

7.12.3 *Business Exceptions*

None.

7.12.4 *System Exceptions*

None.

7.13 **Authorized By**

7.13.1 *Behavior*

Drop down of all of the contacts for the bill-to. See Contact name.

7.13.2 *Validation*

Authorized by is required when the authorization status is "Authorized"

7.13.3 *Business Exceptions*

None.

7.13.4 *System Exceptions*

None.

7.14 **"Add New" Contact Button**

See Add New from Bill-to.

7.15 **Output field for Green-screen ECARS Auth Amount Field**

7.15.1 *Behavior*

This is an output field that displays the information from the Max Amount Field in the Reservation / Open Ticket.

It cannot be updated by the user.

Anytime the contract is saved, this field is updated with the values from the Daily Amount concatenated with the Total Max Amount and saved to legacy that way. If both of those fields are blank, then no update is made.

7.15.2 *Validation*

None

7.15.3 *Business Exceptions*

None

7.15.4 *System Exceptions*

None

7.16 **Status**

7.16.1 *Behavior*

The default value is 'blank'.

The user can select one of the following: REIMBURSEMENT, AUTHORIZED, PENDING, DECLINED, TERMINATED.

7.16.2 *Validation*

If the user selects Authorized, then some fields in the authorization information box are required. See those fields for those notes.

7.16.3 *Business Exceptions*

None.

7.16.4 *System Exceptions*

None.

7.17 **Claim Type**

7.17.1 *Behavior*

Drop-down. The user can select from among "Insured, Claimant, or Theft. (Equivalent values will be determined for each country.)

Default to "blank".

7.17.2 *Validation*

This field is required when the rental type is "Insurance".

7.17.3 *Business Exceptions*

None.

7.17.4 *System Exceptions*

None.

7.18 **Insured Name**

7.18.1 *Behavior*

This is a text field.

7.18.2 *Validation*

Optional.



The bill-to account may require that information be captured in this field (AASI02), but it is only required at the time of close. The account may, however, require that any information in the field be in a particular format. This is to be enforced during Reservation, Open and Close.

#### 7.18.3 *Business Exceptions*

None.

#### 7.18.4 *System Exceptions*

None.

### 7.19 **Claim/Pol/PO/RO**

#### 7.19.1 *Behavior*

This is a text field.

#### 7.19.2 *Validation*

Optional.

The bill-to account may require that information be captured in this field (AASI02), but it is only required at the time of close. The account may, however, require that any information in the field be in a particular format. This is to be enforced during Reservation, Open and Close.

#### 7.19.3 *Business Exceptions*

None.

#### 7.19.4 *System Exceptions*

None.

### 8. **Maximum Information**

#### 8.1 **Overall behavior**

#### 8.2 **Max Per Day**

##### 8.2.1 *Behavior*

This is a numeric field which must support the local currency formatting.

##### 8.2.2 *Validation*

This field is not required.

##### 8.2.3 *Business Exceptions*

None.

##### 8.2.4 *System Exceptions*

None.

#### 8.3 **Total Max Amount**

##### 8.3.1 *Behavior*

This is a numeric field which must support the local currency formatting.

8.3.2 Validation

This field is not required.

8.3.3 Business Exceptions

None.

8.3.4 System Exceptions

None.

8.4 Max # Days

8.4.1 Behavior

This is a numeric field which must support integers.

8.4.2 Validation

This field is not required.

8.4.3 Business Exceptions

None.

8.4.4 System Exceptions

None.

8.5 Last Day

8.5.1 Behavior

This is a date field.

8.5.2 Validation

This field is not required.

8.5.3 Business Exceptions

None.

8.5.4 System Exceptions

None.

8.6 "Last Day" Calendar button

8.6.1 Behavior

Displays calendar for date selection

8.6.2 Validation

Standard date calendar.

8.6.3 Business Exceptions

None.

8.6.4 System Exceptions

None.

## **9. Other Authorizations**

### **9.1 Overall behavior**

This section will be omitted from Reservation Pilot. It will only be incorporated once the Perot system has been integrated.

### **9.2 Item**

#### **9.2.1 Behavior**

Drop-down to select from the products available at the renting branch.

#### **9.2.2 Validation**

None.

#### **9.2.3 Business Exceptions**

None.

#### **9.2.4 System Exceptions**

None.

### **9.3 Start Date**

#### **9.3.1 Behavior**

The first date which is authorized to bill for the item. This should default to the start date in the Authorization Information above.

#### **9.3.2 Validation**

Standard date formatting.

Must be a date within the range of pickup date and return date.

Requires a status of "Authorized"

#### **9.3.3 Business Exceptions**

None.

#### **9.3.4 System Exceptions**

None.

### **9.4 End Date**

#### **9.4.1 Behavior**

The end date should default to the end date of the authorization above. Provided that it is the same, when the end date of the "master authorization" is changed, the end date should change for each item with a matching end date.

#### **9.4.2 Validation**

Standard date formatting.

Must be a date which is equal to or after the Start Date for the item authorized.

Requires a status of "Authorized"

9.4.3 *Business Exceptions*

None.

9.4.4 *System Exceptions*

None.

9.5 **Amount**

9.5.1 *Behavior*

Text field.

9.5.2 *Validation*

None.

9.5.3 *Business Exceptions*

None.

9.5.4 *System Exceptions*

None.

9.6 **Tax**

9.6.1 *Behavior*

Drop down to indicate either "included" or "plus tax". Should default to "included."

9.6.2 *Validation*

Required for each row where an item is selected.

9.6.3 *Business Exceptions*

None.

9.6.4 *System Exceptions*

None.

10. **Account Search Screen**

10.1 **Overall Note**

This screen is called from the Bill-to screen. These notes are intended to highlight to overall functionality, but may not reflect the most up-to-date changes. See the use case and screen spec for Account Search for the most accurate information.

10.2 **Group**

10.2.1 *Behavior*

This is a drop-down to limit the scope of the search.

10.2.2 *Validation*

Any group present in the drop down is valid for search.

10.2.3 *Business Exceptions*

None.

#### 10.2.4 *System Exceptions*

None.

### 10.3 **Account Name**

#### 10.3.1 Behavior

The information in the text field is used in association with the "Account Phone Number" and "Account Type" to limit the scope of the search.

#### 10.3.2 Validation

The field is optional.

The field defaults to blank.

#### 10.3.3 *Business Exceptions*

None.

#### 10.3.4 *System Exceptions*

None.

### 10.4 **Account Phone Number**

#### 10.4.1 Behavior

The information in the text field is used in association with the "Account Name" and "Account Type" to limit the scope of the search.

#### 10.4.2 Validation

The field is optional.

The field defaults to blank.

#### 10.4.3 *Business Exceptions*

None.

#### 10.4.4 *System Exceptions*

None.

### 10.5 **Account Type**

#### 10.5.1 Behavior

Drop down.

The information is used in association with the "Account Phone Number" and "Account Name" to limit the scope of the search.

#### 10.5.2 Validation

The field is optional.

The field defaults to "All".

#### 10.5.3 *Business Exceptions*

None.

10.5.4 *System Exceptions*

None.

**10.6 Search Button**

10.6.1 *Behavior*

Executes the search using the criteria entered above.

10.6.2 *Validation*

None.

10.6.3 *Business Exceptions*

None.

10.6.4 *System Exceptions*

None.

**10.7 Reset Button**

10.7.1 *Behavior*

Clears the screen of the previous search (if applicable) and clears the "Account Name", "Account Phone Number", and "Account Type" fields.

10.7.2 *Validation*

None.

10.7.3 *Business Exceptions*

None.

10.7.4 *System Exceptions*

None.

**10.8 Cancel Button**

10.8.1 *Behavior*

Returns to the screen from which the search was called. No account name or number is returned.

10.8.2 *Validation*

None.

10.8.3 *Business Exceptions*

None.

10.8.4 *System Exceptions*

None.

10.8.5 *Validation*

None.

10.8.6 *Business Exceptions*

None.

10.8.7 *System Exceptions*

None.

10.9 **Page Numbers (Hyperlinks)**

10.9.1 Behavior

Positions the list to the page selected, or to the "Previous" or "Next" page, if selected.

10.9.2 Validation

These should not be hyperlinks, if no more than one page of Accounts were returned. (i.e. If only one page of accounts is displayed, then the "Prev", "Next" will display on either side of the number "1", and none of them will be hyperlinks.)

10.9.3 *Business Exceptions*

None.

10.9.4 *System Exceptions*

None.

11. **Not on File**

11.1 **Note**

International considerations have not yet been made.

11.2 **Name**

11.2.1 Behavior

Text field to enter the name of the company.

11.2.2 Validation

This field is required.

11.2.3 *Business Exceptions*

None.

11.2.4 *System Exceptions*

None.

11.3 **Address**

11.3.1 Behavior

Text field to enter the company's address.

11.3.2 Validation

All address formatting rules apply. This field is required.

11.3.3 *Business Exceptions*

None.

11.3.4 *System Exceptions*

None.

## **11.4 Zip**

### **11.4.1 Behavior**

Text field to enter the company's zip code.

### **11.4.2 Validation**

All address formatting rules apply. This field is required. The zip code can be entered and then the user can use the button behind the field to search for the City and State information. Complies with standard address formatting, etc...

### **11.4.3 Business Exceptions**

None.

### **11.4.4 System Exceptions**

None.

## **11.5 Phone**

### **11.5.1 Behavior**

Text field to enter the company's phone number.

### **11.5.2 Validation**

All phone number formatting rules apply. This field is required.

### **11.5.3 Business Exceptions**

None.

### **11.5.4 System Exceptions**

None.

## **11.6 City**

### **11.6.1 Behavior**

Text field to enter the company's city.

### **11.6.2 Validation**

All address formatting rules apply. This field is required.

### **11.6.3 Business Exceptions**

None.

### **11.6.4 System Exceptions**

None.

## **11.7 State**

### **11.7.1 Behavior**

Drop-down field to enter the company's state.

### **11.7.2 Validation**

All address formatting rules apply. This field is required.



11.7.3 *Business Exceptions*

None.

11.7.4 *System Exceptions*

None.

11.8 **Contact Last Name**

11.8.1 Behavior

Text field to enter an individual's last name.

11.8.2 Validation

This field is required.

11.8.3 *Business Exceptions*

None.

11.8.4 *System Exceptions*

None.

11.9 **Contact First Name**

11.9.1 Behavior

Text field to enter an individual's first name.

11.9.2 Validation

This field is required.

11.9.3 *Business Exceptions*

None.

11.9.4 *System Exceptions*

None.

12. **Add Contact**

12.1 **Last Name**

12.1.1 Behavior

Text field to enter an individual's last name.

12.1.2 Validation

Either of the two fields is required.

12.1.3 *Business Exceptions*

None.

12.1.4 *System Exceptions*

None.

## **12.2 First Name**

### **12.2.1 Behavior**

Text field to enter an individual's first name.

### **12.2.2 Validation**

Either of the two fields is required.

### **12.2.3 Business Exceptions**

None.

### **12.2.4 System Exceptions**

None.

## **13. Rates Table**

### **13.1.1 Behavior**

This table displays the car classes and rates for the bill-to account. For display purposes, international considerations for tiered rates have not yet been taken into account, although the functionality is described in the "Rate List Button" text above.

The user can select an amount / car class to be authorized by clicking a car class.

### **13.1.2 Validation**

None.

### **13.1.3 Business Exceptions**

None.

### **13.1.4 System Exceptions**

None.

## **14. Rules**

### **14.1 Tabbing**

Tabbing between fields should be in the order that they are in this document.

## **15. Security**

The user must have the appropriate security level to access this screen.

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## 16. System Generated Notes Table (as of 6 August, 2001)

	Note Text	When to generate in Reservation	When to generate in Open	Use Case/
Reservation becomes an open ticket if reservation has already been	"Ticket Opened"		Create	Oper
When a ticket is opened, the information in the preference field will be generated as	Any text within the preference field		Create	Oper
When a ticket is opened, the text in the vehicle notes, will be generated as a	Text in the field "Vehicle Notes"		Create	Oper
When a reservation is matched or unmatched to	Reservation # "XXXXXX" was (un) matched to Ticket # "XXXXXX".		Create/Edit	Oper
When a reservation is created	"Reservation Created"	Create		Create
When a reservation marks the ARMS Status Dialog "Renter Has Been Contacted"	"Renter Has Been Contacted" AND any text entered in the ARMS Notes field	Edit		Navigation/Dialog I
When a reservation marks the ARMS Status Dialog "Renter Has Not Been Contacted"	"Renter Has Been Contacted" AND any text entered in the ARMS Notes field	Edit		Navigation/Dialog I
When a reservation Pick-up date is changed	Pick-up Date "XX/XX/XXXX" was changed to "XX/XX/XXXX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Di
When a reservation Pick-up time is changed	Pick-up Time "XX: XX" was changed to "XX: XX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Di
When a reservation Pick-up method is	Pick-up Method "XX" was changed to "XX".	Edit	Create (if selected in the Reservation) /Edit	Rates/Di
When a reservation Pick-up location is	Pick-up Location "XXXX" was changed to "XXXXX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Di
When a reservation Return date is changed	Return Date "XX/XX/XXXX" was changed to "XX/XX/XXXX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Di
When a reservation Return time is changed	Return Time "XX: XX" was changed to "XX: XX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Di
When a reservation return method is changed	Return Method "XX" was changed to "XX".	Edit	Create (if selected in the Reservation) /Edit	Rates/Di
When a reservation Rate Source and/or Account Number is changed	Rate Source "XXXXX" was changed to "XXXXX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Di
When a reservation Rate Type is changed	Rate Type "XXXX" was changed to "XXXX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Di
When a reservation Car Class is changed	Car Class "XXXX" was changed to "XXXX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Di

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	Note Text	When to generate in Reservation	When to generate in Open	Use Case/s
Rate source and car class has been changed or the user manually changes any of the rates populated in the vehicle rate	What rate values were changed and what the old and new values are.	Create/Edit	Create/Edit	Rates/D
Reservation return location is changed	Return Location "XXXX" was changed to "XXXXX"	Edit	Create (if selected in the Reservation) /Edit	Pick-up Location
Pick-up or Branch of the Reservation location is changed	Pick-up Location "GPBR" was changed to "GPBR"	Edit	Create (if selected in the Reservation) /Edit	Pick-up Location
Pick-up or Branch of the Reservation location is changed	Return Location "GPBR" was changed to "GPBR"	Edit	Create (if selected in the Reservation) /Edit	Pick-up Location
User has populated the products for a rate source has been chosen or user manually changes any of the	What values were changed and what the old and new values are.	Create/Edit	Create/Edit	Products Discount
User changes a tax or surcharge.	What values were changed and what the old and new values are.	Create/Edit	Create/Edit	Tax
User changes the tax-exempt status.	Tax Exempt Status "XXXX" was changed to "XXXX".	Create/Edit	Create/Edit	Tax/Dri
User chooses to "Rent" when a renter bypasses "Renter Warning"	"Renter Warning overridden"	Create/Edit	Create/Edit	Basic Res/
User chooses to bypass the warning when driver's age is either over 70. 21-20 years of age.	"Underage/Overage warning overridden"	Create/Edit	Create/Edit	Basic Res/
User changes any phone number of renter or an additional driver.	What Values were changed and what the old and new values are.	Create (if populated by Driver search)/Edit	Create (if data exists from the reservation) /Edit	Basic Res/
User changes any renter or additional driver's first or last name	What values were changed and what the old and new values are	Create/Edit	Create/Edit	Basic Res/
User adds or deletes an additional driver	Driver "Last Name, First Name" was removed	Create/Edit	Create (if data exists from the reservation) /Edit	Basic Res/
User changes the Referral Account	Referral Account "XXXXX" was changed to "XXXXXX"	Edit	Create (if data exists from the reservation) /Edit	Referr
User changes the referral contact. (Referral account is the same)	Referral Contact "XXXX" was changed to "XXXX" for Referral Account "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Referr
User adds a "not on file" contact	Not on File Contact "First Name, Last Name" was added for Referral Account "XXXXX".	Create/Edit	Create/Edit	Referr
User changes the bill-to account.	Bill-to "XXXX" was changed to "XXXX".	Edit	Create (if data exists from the reservation) /Edit	Bill-to
User changes the bill-to contact. (The account is the same)	Bill-To Contact "XXXXX" was changed to "XXXX" for Bill-to account "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to

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	Note Text	When to generate in Reservation	When to generate in Open	Use Case/s
adds a "not of file" bill-to	Not on file contact "First Name Last Name" was added for Bill-to Account "XXXXX"	Create/Edit	Create/Edit	Bill-t
changes the authorized by (The Bill-to account is the same)	Authorized By "XXXX" was changed to "XXXX" for Bill-to Account "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-t
changes the auth status. (The account is the same)	The Authorization Status was changed from "XXX" to "XXXX" for Bill-to account "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-t
changes the auth %. (The Bill-to is the same)	The Authorization % was changed from "XX" to "XX" for Bill-to Account "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-t
changes the Max Per day. (The account is the same)	The Maximum Amount Per Day was changed from "XX" to "XX" for Bill-to Account "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-t
changes the Max Billable (The Bill-to account is the same)	The Maximum Billable Amount was changed from "XX" to "XX" for Bill-to Account "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-t
changes the number of days. (The Bill-to account is the same)	The number of days was changed from "XX" to "XX" for Bill-to Account "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-t
changes either the Billing start date and billing start time (The Bill-to is the same)	The Billing Start Date and Billing Start Time changed from "XXXXXX" to "XXXXXXXXX" for Bill-to Account "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-t
changes either the Billing end date and billing end time. (The Bill-to is the same)	The Billing End Date and Billing End Time changed from "XXXXXX" to "XXXXXXXXX" for Bill-to account "XXXXX".	Edit	Create (if data exists from the reservation) /Edit	Bill-t
changes the daily rate. (The Bill-to account is the same)	The Daily Rate was changed from "XXXX" to "XXXX" for Bill-to account "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-t
changes the Authorized Car Class (The Bill-to is the same)	The Authorized Car Class was changed from "XXXX" to "XXXX" for Bill-to account "XXXXX".	Edit	Create (if data exists from the reservation) /Edit	Bill-t
changes the Plus Tax check box (The Bill-to account is the same)	What the check box was and what it was changed to	Edit	Create (if data exists from the reservation) /Edit	Bill-t
changes a product or service (The Bill-to account is the same)	What Products were added or deleted and the amounts they were changed from and to.	Create/Edit	Create/Edit	Bill-t
adds a Not on File Bill-to	Not on File Account "XXXXX" has been added as a Bill-to	Create/Edit	Create/Edit	Bill-t
changes the Ro/Po/Cl #. (The Bill-to account is the same)	The RO/PO/CL # was changed from "XXXXX" to "XXXXX" for Bill-to account "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-t
changes the Claim type. (The Bill-to account is the same)	The Claim Type was changed from "XXXX" to "XXXX" for Bill-to account "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-t

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	Note Text	When to generate in Reservation	When to generate in Open	Use Case/Scenario
changes the insured's name.	The Insured's Name was changed from "XXXXXX" to "XXXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to

## Cash Qualification Screen Action Specification

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<document identifier>	

## Revision History

Date	Version	Description	Author
04/12/2001	0.0	Created Template	Marty Tichy
04/16/2001	1.0	Created Document	Maribeth Concannon
06/18/2001	1.1	Updated screen shots & doc title	Marty Tichy
09/04/2001	1.2	Updated screenshots to reflect changes from Navigation use case.	James Atteberry



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## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Insurance Details screen.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Screen Print

**CashQual1 - Microsoft Internet Explorer provided by Enterprise Rent-a-Car**

Reservation: [ ] Contracts: [ ] Call Log: [ ]

**DRIVERS**  
James Atteberry  
Additional Drivers: 2

**REFERRAL**  
Account Name  
Contact Name

**DATES/RATES**  
08/27/2001; ECAR  
Daily Rate; ASD

**BILL-TO**  
Account Name  
Contact Name

**VEHICLE/SHOP**  
1997 Dodge Avenger  
Shop Account Name

**NOTES**  
Notes Taken: 1  
Changed: 08/27/2001

**Drivers - Cash Qualification** [Options -] [Go] [X]

Atteberry, James | Smith, Chris | Cloud, Kevin

Driver	Other Address	Insurance Detail	Cash Qualification												
<b>Cash Qualification</b> How long at the current address: 0 Years 0 Months Ownership: [ ]															
<b>Employment Verification</b> <table border="1"> <thead> <tr> <th>Employer</th> <th>Position</th> <th>How Long?</th> </tr> </thead> <tbody> <tr> <td>[ ]</td> <td>[ ]</td> <td>0 Years</td> </tr> <tr> <td>Supervisor's Name</td> <td>Spoke To Whom</td> <td>0 Months</td> </tr> <tr> <td>[ ]</td> <td>[ ]</td> <td></td> </tr> </tbody> </table>				Employer	Position	How Long?	[ ]	[ ]	0 Years	Supervisor's Name	Spoke To Whom	0 Months	[ ]	[ ]	
Employer	Position	How Long?													
[ ]	[ ]	0 Years													
Supervisor's Name	Spoke To Whom	0 Months													
[ ]	[ ]														
<b>Rental Information</b> Reason for Renting: <input type="checkbox"/> Car In Shop <input type="checkbox"/> Weekend Rented Previously: [ ]															

[Back] [Complete]

Res - 411781 | Tkt - 234567 | Cbk - 363221

**Figure1 - Cash Qualification Address & Employment Verification**

<Project Name>	Version: <1.0>
Supplementary Specification	Date: <dd/mmm/yy>
<document identifier>	

CashQual1 - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

Reservations    Contracts    Callbacks

**DRIVERS**  
James Atteberry  
Additional Drivers: 2

**REFERRAL**  
Account Name  
Contact Name

**DATES/RATES**  
08/27/2001; ECAR  
Daily Rate; ASD

**BILL-TO**  
Account Name  
Contact Name

**VEHICLE/SHOP**  
1997 Dodge Avenger  
Shop Account Name

**NOTES**  
Notes Taken: 1  
Changed: 08/27/2001

**Drivers - Cash Qualification**    - Options -

Atteberry, James    Smith, Chris    Cloud, Kevin

Driver	Other Address	Insurance Detail	Cash Qualification
<p>Reason for Renting: <input type="checkbox"/> Car In Shop    Rented Previously: <input type="text"/></p> <p><input type="checkbox"/> Weekend    If so, when? <input type="text"/></p> <p><input type="checkbox"/> Vacation</p> <p><input type="checkbox"/> Other: <input type="text"/></p> <p>Do you own a car? <input type="text"/></p>			

References (Three Different People)

	First Name	Last Name	Phone Number	Relationship
1.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
3.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Res - 411781    Tkt - 234567    Cbk - 363221

**Figure 2 - Cash Qualification Rental Information**

<Project Name>	Version: <1.0>
Supplementary Specification	Date: <dd/mmm/yy>
<document identifier>	

Open Ticket Cash Qual - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Call Diskless Realcom

Address F:\html\Reservation\Navigation\TAPgaaurj71pj.htm

Driver Summary 2 James Chris Kevin

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

Driver Other Address Insurance Detail Cash Qualification

☐ Other:

Do you own a car?

**References (Three Different People)**

	First Name	Last Name	Phone Number	Relationship
1.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
3.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

**Authorized By**

User Id Password

Res - 411781 Tkt - 234567 Cbk - 363221

**Figure 3 - Cash Qualification**

<Project Name>	Version: <1.0>
Supplementary Specification	Date: <dd/mmm/yy>
<document identifier>	

### 3. Top (see Figure 1)

#### 3.1 Years at current address

##### 3.1.1 Behavior

This is a drop down list of integers and zero. The drop down should start at 0 and go through 9, followed by "10+".

##### 3.1.2 Validation

No validation is necessary. The field is optional.

##### 3.1.3 Business Exceptions

None have been identified at this time.

##### 3.1.4 System Exceptions

None have been identified at this time.

#### 3.2 Months at current address

##### 3.2.1 Behavior

This is a drop down list of integers and zero. The drop down should start at 0 and go through 11.

##### 3.2.2 Validation

No validation is necessary. The field is optional.

##### 3.2.3 Business Exceptions

None have been identified at this time.

##### 3.2.4 System Exceptions

None have been identified at this time.

#### 3.3 Ownership

##### 3.3.1 Behavior

This is a drop down list of two values (own & rent) plus a blank. Since the selection is optional, it should default to blank.

##### 3.3.2 Validation

No validation is necessary. The field is optional.

##### 3.3.3 Business Exceptions

None have been identified at this time.

##### 3.3.4 System Exceptions

None have been identified at this time.

<Project Name>	Version: <1.0>
Supplementary Specification	Date: <dd/mm/yy>
<document identifier>	

#### **4. Employment Verification (see Figure 1)**

##### **4.1 Employer**

###### **4.1.1 Behavior**

This is an alphanumeric field.

###### **4.1.2 Validation**

No validation is necessary. The field is optional.

###### **4.1.3 Business Exceptions**

None have been identified at this time.

###### **4.1.4 System Exceptions**

None have been identified at this time.

##### **4.2 Position**

###### **4.2.1 Behavior**

This is an alphanumeric field.

###### **4.2.2 Validation**

No validation is necessary. The field is optional.

###### **4.2.3 Business Exceptions**

None have been identified at this time.

###### **4.2.4 System Exceptions**

None have been identified at this time.

##### **4.3 Supervisor's Name**

###### **4.3.1 Behavior**

This is an alphanumeric field.

###### **4.3.2 Validation**

No validation is necessary. The field is optional.

###### **4.3.3 Business Exceptions**

None have been identified at this time.

###### **4.3.4 System Exceptions**

None have been identified at this time.

##### **4.4 Spoke to Whom**

###### **4.4.1 Behavior**

This is an alphanumeric field.



<Project Name>	Version: <1.0>
Supplementary Specification	Date: <dd/mmm/yy>
<document identifier>	

#### 4.4.2 Validation

No validation is necessary. The field is optional.

#### 4.4.3 Business Exceptions

None have been identified at this time.

#### 4.4.4 System Exceptions

None have been identified at this time.

### 4.5 Years at Employer

#### 4.5.1 Behavior

This is a drop down list of integers and zero. The drop down should start at 0 and go through 9, followed by "10+".

#### 4.5.2 Validation

No validation is necessary. The field is optional.

#### 4.5.3 Business Exceptions

None have been identified at this time.

#### 4.5.4 System Exceptions

None have been identified at this time.

### 4.6 Months at Employer

#### 4.6.1 Behavior

This is a drop down list of integers and zero. The drop down should start at 0 and go through 11.

#### 4.6.2 Validation

No validation is necessary. The field is optional.

#### 4.6.3 Business Exceptions

None have been identified at this time.

#### 4.6.4 System Exceptions

None have been identified at this time.

## 5. Rental Information (see Figure 2)

### 5.1 Reason for Renting

#### 5.1.1 Behavior

This is a choice among four values: Car in Shop, Weekend, Vacation, and Other. Since the selection is optional, it should default to nothing selected.

#### 5.1.2 Validation

The selection and description are optional.

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Supplementary Specification	Date: <dd/mmm/yy>
<document identifier>	

If Other is selected, then the field next to it is enabled to allow a description. The description is not required.

### 5.1.3 *Business Exceptions*

None have been identified at this time.

### 5.1.4 *System Exceptions*

None have been identified at this time.

## 5.2 **Rented Previously**

### 5.2.1 *Behavior*

This is a drop down of two values (yes & no) and a blank. Since the selection is optional, it should default to blank.

### 5.2.2 *Validation*

The selection and description are optional.

### 5.2.3 *Business Exceptions*

None have been identified at this time.

### 5.2.4 *System Exceptions*

None have been identified at this time.

## 5.3 **If so, when?**

### 5.3.1 *Behavior*

This is an alphanumeric field. If the answer to "Rented Previously" is Yes, then this field is enabled to allow an answer. The answer is not required.

### 5.3.2 *Validation*

The selection and description are optional.

### 5.3.3 *Business Exceptions*

None have been identified at this time.

### 5.3.4 *System Exceptions*

None have been identified at this time.

## 5.4 **Do you own a car?**

### 5.4.1 *Behavior*

This is a drop down of two values (Yes & No) and a blank. Since the selection is optional, it should default to blank.

### 5.4.2 *Validation*

The selection is optional.

### 5.4.3 *Business Exceptions*

None have been identified at this time.

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<document identifier>	

#### 5.4.4 *System Exceptions*

None have been identified at this time.

### 6. **References (see Figure 2)**

This section is not a dynamic list but rather a set of 3 names and associated information (below) which can be entered by the user.

#### 6.1 **First Name (column)**

##### 6.1.1 *Behavior*

This is an alphanumeric field.

##### 6.1.2 *Validation*

No validation is necessary. The field is optional.

##### 6.1.3 *Business Exceptions*

None have been identified at this time.

##### 6.1.4 *System Exceptions*

None have been identified at this time.

#### 6.2 **Last Name (column)**

##### 6.2.1 *Behavior*

This is an alphanumeric field.

##### 6.2.2 *Validation*

No validation is necessary. The field is optional.

##### 6.2.3 *Business Exceptions*

None have been identified at this time.

##### 6.2.4 *System Exceptions*

None have been identified at this time.

#### 6.3 **Phone Number (column)**

##### 6.3.1 *Behavior*

This is an alphanumeric field. It should comply with the standard phone number field formatting. (06/05/2001- To date, no European considerations have been noted (waiting on update to Use Case).

##### 6.3.2 *Validation*

The field is optional.

It should be edited to comply with the locale's format (i.e. in the United States, the length is 10 digits and include delimiters after the 3<sup>rd</sup> and 6<sup>th</sup> characters. If no delimiters are used, but 10 digits are entered, that is also valid.)

##### 6.3.3 *Business Exceptions*

None have been identified at this time.

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#### 6.3.4 *System Exceptions*

None have been identified at this time.

### 6.4 **Relationship (column)**

#### 6.4.1 Behavior

This is an alphanumeric field.

#### 6.4.2 Validation

No validation is necessary. The field is optional.

#### 6.4.3 *Business Exceptions*

None have been identified at this time.

#### 6.4.4 *System Exceptions*

None have been identified at this time.

## 7. **Authorized By**

### 7.1 **User ID**

#### 7.1.1 *Behavior*

This is an alphanumeric field and should conform to the standards for User ID.

#### 7.1.2 *Validation*

Must be a valid employee, authorized to the Rental Application.

#### 7.1.3 *Business Exceptions*

None have been identified at this time.

#### 7.1.4 *System Exceptions*

None have been identified at this time.

### 7.2 **Password**

#### 7.2.1 *Behavior*

This is an alphanumeric field and should conform to the standards for Passwords.

#### 7.2.2 *Validation*

Must be the employee's password.

#### 7.2.3 *Business Exceptions*

None have been identified at this time.

#### 7.2.4 *System Exceptions*

None have been identified at this time.

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## 8. Button Line Area

### 8.1 Back Button

#### 8.1.1 Behavior

The Back button will take the user to the main Driver screen for the currently selected Driver.

#### 8.1.2 Validation

None identified at this time.

#### 8.1.3 Business Exceptions

None identified at this time.

#### 8.1.4 System Exceptions

None identified at this time.

### 8.2 Complete button

#### 8.2.1 Behavior

The Complete button will initiate a save of the transaction. All validations will be performed, returning any errors to the user. If there are no errors, the transaction is saved, and the user is returned to the Reservation home page.

#### 8.2.2 Validation

None identified at this time.

#### 8.2.3 Business Exceptions

None identified at this time.

#### 8.2.4 System Exceptions

None identified at this time.

## 9. Note for OPEN (vs. Reservation)

Password and employee ID will be added at the bottom for authentication of the person authorizing the Cash Qualification.

## 10. Rules

### 10.1 Required Fields

There are no required fields .

### 10.2 Tabbing

Tabbing between fields should be in the order that they are in this document.

### 10.3 Saving

Because none of the information on the screen is required, the user can leave the screen at any time. The save is completed when the user saves the reservation or ticket.

## 11. Security

The user must have the appropriate security level to access this screen.

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2CARS 2.0 Reservation

Use Cases				
File Edit View Help				
Name	Size	Type	Modified	
201 Basic Reservation	103KB	Microsoft Word Document	11/29/01 3:34 PM	
202 Callback Flag	76KB	Microsoft Word Document	11/29/01 3:37 PM	
203 Create Reservation	108KB	Microsoft Word Document	11/29/01 3:41 PM	
204 Daily Reservation Detail	70KB	Microsoft Word Document	11/29/01 3:50 PM	
205 Edit and Void	193KB	Microsoft Word Document	11/29/01 4:23 PM	
206 Enter Cash Qualification Information	115KB	Microsoft Word Document	11/29/01 4:24 PM	
207 Enter Renter's Additional Driver Insurance ...	93KB	Microsoft Word Document	11/29/01 4:25 PM	
208 Manually Entered Notes	100KB	Microsoft Word Document	11/29/01 4:26 PM	
209 Quote Rates	120KB	Microsoft Word Document	11/29/01 4:28 PM	
210 Referral	93KB	Microsoft Word Document	11/29/01 4:30 PM	
211 Res Bill To Use Case	87KB	Microsoft Word Document	11/29/01 4:31 PM	
212 Res Renter Vehicle Shop UC	188KB	Microsoft Word Document	11/29/01 4:33 PM	
213 Reservation Dates	95KB	Microsoft Word Document	11/29/01 4:42 PM	
214 Reservation Discounts And Products	58KB	Microsoft Word Document	11/29/01 4:44 PM	
215 Reservation FastPath	52KB	Microsoft Word Document	11/29/01 4:46 PM	
216 Reservation Forecasting	56KB	Microsoft Word Document	11/29/01 4:48 PM	
217 Reservation Notification (ARMS & UK Call ...	80KB	Microsoft Word Document	11/29/01 4:58 PM	
218 Reservation Pick Up Summary	60KB	Microsoft Word Document	11/29/01 4:21 PM	
219 Reservation Search	86KB	Microsoft Word Document	11/29/01 5:00 PM	
220 Reservation Summary	47KB	Microsoft Word Document	11/29/01 4:49 PM	
221 Transfer Reservation	74KB	Microsoft Word Document	11/29/01 5:04 PM	

Object(s) selected 73.5KB

Object(s) selected

---

<Company Name>

---

<ECARS 2.0 Reservation>  
Use Case Specification: <Basic Reservation>

Version <1.0>



<u>&lt;Project Name&gt;</u>	Version: <u>&lt;1.0&gt;</u>
Use Case Specification: <u>&lt;Use-Case Name&gt;</u>	Date: <u>&lt;dd/mm/yy&gt;</u>
<u>&lt;document identifier&gt;</u>	

## Revision History

<u>Date</u>	<u>Version</u>	<u>Description</u>	<u>Author</u>
<u>&lt;05/25/2001&gt;</u>	<u>&lt;1.1&gt;</u>	<u>&lt;Initial draft&gt;</u>	<u>&lt;J. Gaines&gt;</u>
<u>05/31/2001</u>		<u>Eliminate DL requirements for res.</u> <u>Distinguish difference between state</u> <u>issue validation and issuing authority</u> <u>validation.</u> <u>Break down age soft edit further.</u>	<u>J. Gaines</u>
<u>6/4/2001</u>		<u>Put DL requirements back in.</u> <u>Imported into Req Pro</u>	<u>J. Gaines</u>
<u>9/7/2001</u>		<u>Updated wording on Phone Number</u> <u>and sorting on Phone Number.</u> <u>Changed Account Search to Search.</u>	<u>L. Moellman</u>
<u>10/10/2001</u>	<u>1.5</u>	<u>Removed requirements related to the</u> <u>Save and Continue functionality. This</u> <u>functionality has been removed from</u> <u>the application.</u>	<u>James Atteberry</u>  #
<u>11/14/2001</u>	<u>1.6</u>	<u>Added additional driver validation on</u> <u>page submit that additional driver last</u> <u>name was entered</u>	<u>J. Gaines</u>

<Project Name>	Version: <1.0>
Use Case Specification: <Use-Case Name>	Date: <dd/mm/yy>
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## Use Case Specification: <Basic Reservation>

### 1. Basic Reservation

#### 1.1 Brief Description

The use case describes the interaction between the user and the system when a renter calls and the user captures renter and additional driver information.

### 2. Flow of Events

#### 2.1 Basic Flow

2.1.1 The system displays renter information fields to be completed by the user.

The following is the list of fields to be completed by the user:

Most commonly entered information (North America):

- Last Name
- First Name
- Hm Phone
- Wk Phone
- Extension
- Other Phone
- Phone Description

Less commonly entered information (North America):

- Address
- Zip
- Country
- City
- State
- Other Address
- Employer
- License Number
- Expiration Date
- Country Issued
- State Issued
- DOB (Date of Birth)
- SSN
- Height – Feet
- Height - Inches
- Weight
- Hair Color
- Eye Color

Note: Primary payment method is part of the above list but will not be implemented until E2.

Most commonly entered information (U.K.):

- Last Name
- First Name
- Hm Phone

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Use Case Specification: <Use-Case Name>	Date: <dd/mmm/yy>
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- Wk Phone
- Extension
- Other Phone
- Phone Description

Less commonly entered information (U.K.):

- Address (A 2nd renter address field is added in U.K.)
- Postal Code
- Country
- City
- County
- Other Address
- Employer
- Licence Number (note difference in spelling)
- Expiration Date
- Issuing Authority
- DOB (Date of Birth)
- National ID (Social Security Number in US)
- Height – Feet (NOT CAPTURED IN U.K., Germany, Ireland.)
- Height – Inches (NOT CAPTURED IN U.K., Germany, Ireland.)
- Weight (NOT CAPTURED IN U.K., Germany, Ireland.)
- Hair Color (NOT CAPTURED IN U.K., Germany, Ireland.)
- Eye Color (NOT CAPTURED IN U.K., Germany, Ireland.)

tNote: Primary Payment Method (note: "check" is spelled "cheque") is part of the above list but will not be implemented until E2.

2.1.2 Renter has the option of initiating any of the following options:

(NOTE: These options are in order of most frequently chosen options to least frequently chosen options)

- Enter data for above listed fields
- Add a Referral Source
- Quote a rate
- Add a pick up/return date and time.
- Add a car class
- Special and discounts
- Add Directions
- Add Notes
- Add Additional drivers
- Insurance Detail
- Cash Qualification
- Print the reservation

(Note: These options are covered in the alternative flows.)

2.1.3 The user enters the above identified renter information into the reservation.

2.1.4 The user has the option to "Complete Reservation" or Cancel. If the user chooses to Exit the reservation the use case continues at alternative flow (Cancel).

2.1.5 The system validates the information entered, as determined by the business rules:

- If the driver's license is expired, the use case continues at alternative flow (Driver's License Expiration date).

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- If the age for DOB entered is over 70, the use case continues at alternative flow (Over Age Restriction).
- If the age for DOB is 18-20, the use case continues at alternative flow (Under Age 18-20 Soft Edit Restriction).
- If the age for DOB is 21-24, the use case continues at alternative flow (Under Age 21-24 Soft Edit Restriction).
- If the age for the DOB entered is under 18, the use case continues at alternative flow (Under Age Rental Restriction).
- If all of the driver's license related fields are not entered along with the driver's license number, the use case continues at alternate flow (Drivers License requirements).
- If the user has not captured the minimum required information of Last Name, the use case continues at alternative Flow (Incomplete Reservation)
- If any additional driver has a warning attached to it's file in the repeat renter database, the use case extends to the alternative flow (Renter Warning) in the Create Reservation use case and then the Renter use case continues.

2.1.6 The use case ends.

## **2.2 Alternative Flows**

### **2.2.1 Drivers License Requirements**

2.2.1.1 If the user enters a driver's license number, the following required information must also be entered; otherwise the system displays an error message that additional information is needed:

- Driver's license expiration date
- State issued
- Date of birth

2.2.1.2 If the user enters any of the driver's license information other than the driver's license number and does not enter the driver's license number the system will display an error message that additional information is needed.

2.2.1.3 If the user enters any of the non-required driver's license information (SSN, height, weight, eye color, or hair color) without also entering the required driver's license information, the system will not display an error message that additional information is needed and the use case continues.

### **2.2.2 Add Additional Drivers**

2.2.2.1 The system displays the area for entry of the first and last name information of the additional driver. The fields in this area are:

#### **Name:**

- First Name
- Last Name

#### **Address:**

- Street Address
- Zip/Postal Code
- Country

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- City
- State/Province

#### **Phone Number:**

- Home Phone Number
- Work Phone Number (and extension)
- Other Phone Number (and phone type)

#### **Driver's License:**

- Driver's License Number
- Driver's License Expiration Date
- State Issued/Issuing Authority
- Date of Birth
- Social Security Number
- Height
- Weight
- Hair Color
- Eye Color

- 2.2.2.2 The user enters the first and last name of the additional driver and the home phone number.
- 2.2.2.3 The system displays the option for the user to select that the additional driver has the same address information as the renter. If the user selects this option continue at (2.2.4.6) in this alternate flow.
- 2.2.2.4 The user enters the street address and zip/postal code.
- 2.2.2.5 Based upon the zip/postal code search the system produces the city and state/province, populates the corresponding fields and continues at the next step in the basic flow. The system also makes the information in these fields available for edit. If the search produces no matching city and state/province information the use case continues at alternate flow (No Match to Zip/Postal Code).
- 2.2.2.6 The user enters additional driver information from the table above (2.2.5.1)
- 2.2.2.7 The system displays the option for the user to:
- Add more additional drivers. (The system allows the user to enter up to 5 additional drivers to the reservation)
  - Delete additional driver information
  - Exit and return to the basic flow.
- 2.2.2.8 If the user selects to add more additional drivers (up to 6), the system adds another blank additional driver area and returns to the first step of this alternate flow. If the user selects to exit the use case returns to the point in the basic flow where the user selected to add the additional driver information.
- 2.2.2.9 Upon submitting the additional driver page, the system validates that the minimum reservation criteria (Additional Driver's Last Name) has been entered. \*\*Note this validation works as it does with the primary driver last name validation

If the user has not captured the minimum required information of Last Name, the use case continues at alternative Flow (Incomplete Reservation)

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### 2.2.3 No Match to Zip/Postal Code

2.2.3.1 The system displays a feedback message that the entered zip/postal code and selected country do not produce matching city and state/province information.

2.2.3.2 The user has the option to:

- Change the zip/postal code and country information and repopulate.
- Continue with the reservation process without the city and state/province information.

2.2.3.3 If the user selects to change the zip/postal code the use case will continue at (..) in the basic flow. If the user elects to continue with the reservation process, the system will allow the user to manually enter information into the city and state/province fields and continue at ( ) in the basic flow. The system will have the already entered information present and ready for the user to enter the city and to select the state/province.

(Note on Address Search Results):

Based upon the zip/postal code search the system produces the city and state/province, populates the corresponding fields and continues at the next step in the basic flow. The system also makes the information in these fields available for edit.

### 2.2.4 Multiple Matches to Zip/Postal Code

2.2.4.1 The system displays a message that more than one city matches the zip/postal code entered and displays the list of matching cities to the user.

2.2.4.2 The user has the option to select one of the cities from the list or cancel and continue with the reservation.

### 2.2.5 Expired Driver's License

2.2.5.1 The system displays a feedback message "Drivers License is Expired".

2.2.5.2 The system prompts the user to:

- Change/enter valid expiration date.
- Cancel.

2.2.5.3 If the user selects to change the expiration date the use case proceeds back to Phone and Driver's License Information Entry in the basic flow. If the user selects to exit the reservation, the use case continues at alternate flow (Cancel).

### 2.2.6 Over Age Soft Edit Restriction

2.2.6.1 The system determines that the age of the renter is 70 years old or older.

2.2.6.2 The system displays a feedback message that the entered date of birth results in the age of the renter being 70 or older. The system also displays the entered date of birth and the renter's age.

2.2.6.3 The system prompts the user to:

- Continue with reservation.
- Enter correct date of birth.
- Cancel.

2.2.6.4 If the user elects to continue with the reservation, the use case continues at (2.1.7) in the basic flow. If the user selects to change the date of birth the use case continues at (2.1.3) in the basic flow.

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flow with the attention placed on the DOB field. If the user selects to exit the reservation, the use case continues at alternate flow (Cancel).

## **2.2.7 Under Age (18-20) Soft Edit Restriction**

2.2.7.1 The system determines that the age of the renter is 18 to 20 years old.

2.2.7.2 The system displays a feedback message that the entered date of birth results in the age of the renter being 18 to 20 years old. The system also displays the entered date of birth and the renter's age.

2.2.7.3 The system prompts the user to:

- Continue with reservation.
- Enter correct date of birth.
- Cancel.

2.2.7.4 If the user elects to continue with the reservation, the use case continues at (2.1.7) in the basic flow. If the user selects to change the date of birth the use case continues at (2.1.3) in the basic flow with attention placed on the DOB field. If the user selects to exit the reservation, the use case continues at alternate flow (Cancel).

## **2.2.8 Under Age (21-24) Soft Edit Restriction**

2.2.8.1 The system determines that the age of the renter is 21 to 24 years old. \*

2.2.8.2 The system displays a feedback message that the entered date of birth results in the age of the renter being 21 to 24 years old. The system also displays the entered date of birth and the renter's age.

2.2.8.3 The system prompts the user to:

- Continue with reservation.
- Enter correct date of birth.
- Cancel.

2.2.8.4 If the user elects to continue with the reservation, the use case continues at (2.1.7) in the basic flow. If the user selects to change the date of birth the use case continues at (2.1.3) in the basic flow with attention placed on the DOB field. If the user selects to exit the reservation, the use case continues at alternate flow (Cancel).

## **2.2.9 Under Age Hard Edit Restriction**

2.2.9.1 The system determines that the age of the renter is equal to or under the age of 17 years old and Do Not Rent.

2.2.9.2 The system displays a feedback message that the entered date of birth results in the age of the renter being under the age restriction. The system also displays the entered date of birth and the renter's age.

2.2.9.3 The system prompts the user to:

- Correct the date of birth.
- Cancel.

2.2.9.4 If the user selects to change the date of birth the use case continues at (2.1.3) in the basic flow with attention placed on the DOB field. If the user selects to exit the reservation, the use case



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continues at alternate flow (Cancel).

## **2.2.10 Incomplete Reservation**

2.2.10.1 The system displays a message notifying that the user has not captured the minimum required information necessary (Renter's Last Name) to create a reservation.

(Note: The user cannot move the message box to the side and attempt to navigate any area on the screen to enter required information. They must click "OK" to dismiss the message box and enter the required information.)

## **2.2.11 Print**

2.2.11.1 The Renter Call Reservation Use Case initiates the Print use case

## **2.2.12 Cancel**

2.2.12.1 The user uses the quit function to confirm that they do not wish to save any of the information that has been entered for a reservation since the last save.

2.2.12.2 The system prompts the user with a dialog box stating that the reservation will not be saved and asking if the user would like to exit the reservation without saving any of the information entered.

2.2.12.3 The use case continues at Reservation Home.

## **2.2.13 Add a Pick Up and Return Date**

2.2.13.1 The Renter Reservation use case initiates the Dates use case to add a pick up/return date and time

## **2.2.14 Add a Car Class**

2.2.14.1 The Renter Reservation Use Case initiates the Dates and/or Rates use case.

## **2.2.15 Quote Rates**

2.2.15.1 The Renter Reservation Use Case initiates the Quote a Rate use case.

## **2.2.16 Specials and Discounts**

2.2.16.1 If the rental requires Discount or Special Rate information the use case initiates the Quote a Rate Use Case.

## **2.2.17 Add a Pick Up Method**

2.2.17.1 The Renter Call Reservation use case initiates the Dates use case

## **2.2.18 Add Directions**

2.2.18.1 The Renter Call Reservation Use Case Initiates the Dates use case.

## **2.2.19 Add Notes**

2.2.19.1 The Renter Call Reservation Use Case initiates the Add Notes use case.

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### 2.2.20 Add Cash Qualification

2.2.20.1 The Renter Call Reservation Use Case initiates the Cash Qualification use case.

### 2.2.21 Add Insurance Detail

2.2.21.1 The Renter Call Reservation Use Case initiates the Insurance Detail use case.

### 2.2.22 Add a Referral Source

2.2.22.1 The Renter Call Reservation Use Case initiates the Referral use case

## 3. Special Requirements – Basic Requirements UC

1. Bold the labels of required fields or put "\*" next to the required fields.
2. Issuing Authority has a different validation than State Issued. State issued is a 2-letter code from a list of valid values. Issuing Authority is a free-form text field.
3. Basic Combo box behavior. The user should enter the letter "M" multiple time to position past Maine Maryland... to Missouri.

## 4. Pre-Conditions

## 5. Post-Conditions

## 6. System Generated Notes – Basic Res.

6.1 Notes should be generated when the following events take place :

<u>Event</u>	<u>Note Text</u>	<u>When to Generate</u>
<u>The user chooses to "Rent" when a renter comes up "Renter Warning"</u>	<u>"Renter Warning overridden"</u>	<u>Create/Edit</u>
<u>The user chooses to bypass the warning when a driver's age is either over 70, 21-24 or 18-20 years of age.</u>	<u>"Underage/Overage warning overridden"</u>	<u>Create/Edit</u>
<u>The User changes the Renter's Home phone number</u>	<u>What Values were changed and what the old and new values are.</u>	<u>Create (if populated by Driver search)/Edit</u>
<u>The User changes any renter or additional driver's first or last name</u>	<u>What values were changed and what the old and new values are</u>	<u>Create/Edit</u>
<u>The user adds or deletes an additional driver</u>	<u>Driver "Last Name, First Name" was removed/ added</u>	<u>Create/Edit</u>
<u>The User changes the Work phone number of the Renter.</u>	<u>Renter "Last name, First name" Work Phone was changed from "XXXX" to "XXXXX".</u>	<u>Create (if populated by Driver search)/Edit</u>
<u>The User changes the Other phone number of the Renter.</u>	<u>Renter "Last name, First Name" Other Phone was changed from "XXXX" to "XXXXX".</u>	<u>Create (if populated by Driver search)/Edit</u>
<u>The User changes any Additional Driver's Home phone number.</u>	<u>Additional Driver "Last Name, First Name" Home Phone was changed from "XXXX" to "XXXXX".</u>	<u>Create (if populated by Driver search)/Edit</u>
<u>The User changes any Additional Driver's Work phone number.</u>	<u>Additional Driver "Last Name, First Name" Work Phone was changed from "XXXX" to "XXXXX".</u>	<u>Create (if populated by Driver search)/Edit</u>
<u>The User changes any Additional Driver's Other phone number.</u>	<u>Additional Driver "Last Name, First Name" Other Phone was changed from "XXXX" to "XXXXX".</u>	<u>Create (if populated by Driver search)/Edit</u>

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## 7. Extension Points

### 7.1 <Name of Extension Point>

#### 8. Q's

- Is there a new requirement that asks to distinguish the underage edit between 18-20 and 21-24 instead of the 18-24 soft edit that is in place now? Yes
- Ability to list additional drivers as "With Valid Lic". Do we want to drive this behavior in Reservation? Free form text to
- Need to allow some way to input or identify if the "Address" field is business or home. Other than having home address and other address?
- Need a check box on the "Additional Driver" tabs to indicate if this person lives in the same household as the renter. In addition, there needs to be a compelling reason for the branch to actively pursue this. Has a compelling reason arisen yet?

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- Need to capture the business address and business name as main fields on the "Renter Screen". This needs to be integrated with Rent-a-car requirements and might mean putting the company name field just below driver and then adding a check box to indicate if it is a business address. Is there a corporate rental need for this or just truck rental?
- Need to be able to attach multiple reservations to one confirmation number. Is this still a business need since reservations are going to be unique and carry forward?

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# Rental Redesign/ECARS 2.0

## Use Case Specification: Reservation Callback

Version <1.0>  
Draft

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## Revision History

Date	Version	Description	Author
<dd/mm/yy>	<x.x>	<details>	<name>
8/22/01	1.0	Initial Draft	Leah Moellman
8/24/01	1.1	Updates from John Hunt and Todd Van Dyke	Leah Moellman
8/28/01	1.2	Updates from internal review	Leah Moellman
8/29/01	1.3	Updates from user review, imported to Req Pro, Requirements marked	Leah Moellman
9/17/01	1.4	Updated proper info needs to be entered or callback indicator is disabled	L. Moellman

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# Use Case Specification: Reservation Callback

## 1. Reservation Callback

### 1.1 Brief Description

This use case will describe how a user interacts with a system to create a callback flag from within a reservation window. It will show the flow of events that occur when a Callback Flag is created.

## 2. Flow of Events

### 2.1 Basic Flow

2.1.1 The use case begins when the user has the option to create a callback from within a reservation window. The user has the option to create a callback for adjuster, service, body shop, or a renter callback. Callback flags can be accessed during the creation or update of a reservation .

2.1.2 The user chooses to create a callback flag for adjuster. If the user chooses service, body shop, or renter the use case continues at alternate flows (Service, Body shop, or Renter).

2.1.3 The system will display the following options to the user :

- Adjuster
- Service
- Body Shop
- Renter
- Comment (The user has the option to enter a comment that will appear in the Reservation only.)

2.1.4 The user elects to create an adjuster callback .

2.1.5 The system validates that the bill-to name and number is entered. If the bill-to information is missing the adjuster callback will be disabled and the use case continues at alternate flow (Missing Bill-To).

2.1.6 The user initiates the system to create an adjuster callback .

2.1.7 The system will create an adjuster callback, based on the created record for the reservation and the use case ends. (Note: Once the callback has been created, the callback can no longer be accessed through the reservation process. The callback flag will still appear with a visual indicator that the callback exists.)

### 2.2 Alternative Flows

### 2.3 Service Callback

2.3.1 The user chooses to create a service callback.

2.3.2 The system will display the following to the user :

- Adjuster
- Service
- Body Shop
- Renter
- Comment (The user has the option to enter a comment that will appear in the Reservation only.)



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2.3.3 The user elects the service callback .

2.3.4 The system validates that the service name and number is entered . If the service information is missing the service callback will be disabled and the use case continues at alternate flow (Missing Shop).

2.3.5 The user initiates the system to create a service callback .

2.3.6 The system will create a service callback, based on the created record for the reservation and the use case ends. (Note: Once the callback has been created, the callback can no longer be accessed through the reservation process . The callback flag will still appear with a visual indicator that the callback exists .)

## 2.4 Body shop Callback

2.4.1 The user chooses to create a Body shop callback.

2.4.2 The system will display the following to the user :

- Adjuster
- Service
- Body Shop
- Renter
- Comment (The user has the option to enter a comment that will appear in the Reservation only.)

2.4.3 The user elects the body shop callback .

2.4.4 The system validates that the shop name and number is entered . If the shop information is missing the body shop callback will be disabled and the use case continues at alternate flow (Missing Shop).

2.4.5 The user initiates the system to create a body shop callback .

2.4.6 The system will create a body shop callback, based on the created record for the reservation and the use case ends. (Note: Once the callback has been created, the callback can no longer be accessed through the reservation process . The callback flag will still appear with a visual indicator that the callback exists.)

## 2.5 Renter Callback

2.5.1 The user chooses to create a renter callback.

2.5.2 The system will display the following to the user:

- Adjuster
- Service
- Body Shop
- Renter
- Comment (The user has the option to enter a comment that will appear in the Reservation only.)

2.5.3 The user elects the renter callback.

2.5.4 The system validates that the renter name is entered . If the renter name is missing the renter callback will be disabled and the use case continues at alternate flow (Missing Renter).

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2.5.5 The user initiates the system to create a renter callback .

2.5.6 The system will create a renter callback, based on the created record for the reservation and the use case ends. (Note: Once the callback has been created, the callback can no longer be accessed through the reservation process. The callback flag will still appear with a visual indicator that the callback exists.)

## 2.6 Missing Bill-To

2.6.1 The system disables the adjuster callback and a note is always displayed as to why the callback is disabled.

2.6.2 The user acknowledges the message and the use case continues at 2.1.4 of the basic flow.

## 2.7 Missing Shop

2.7.1 The system disables the shop callback and a note is always displayed as to why the callback is disabled.

2.7.2 The user acknowledges the message and the use case continues at 2.3.3 of the alternate flow.

## 2.8 Missing Renter

2.8.1 The system disables the renter callback and a note is always displayed as to why the callback is disabled.

2.8.2 The user acknowledges the message and the use case continues at 2.5.1 of the alternate flow.

## 3. National Reservations

### General Rule Sets

- The user cannot edit or create a callback for a Natres Reservation .

## 4. ARMS

- A call center or an insurance company creates the ARMS reservation through the ARMS system without a callback. The user has the option to create a callback for the reservation.
- The callback creation is treated like any other reservation.

## 5. Edit Note

### General Rule Sets

- Deleting a callback cannot be done from the reservation.
- If the user wants to add a callback once the reservation is completed, the system goes through the same validations for edit as it did for create.
- The callback flag only has to be in options menu for editing a reservation.

## 6. Special Requirements-Callback Flag

### General Rule Sets

1. When viewed through the legacy application, any of the items that have been checked in the GUI application will appear with an "X" for the corresponding value in the legacy application.
2. The user will have the ability to create a callback record in the same manner as the legacy system creates callback records.
3. Created callbacks will only be able to be viewed or worked at a callback center or a branch using the legacy application.
4. Callback flags can be accessed during the creation or update of a reservation .
5. The callback flag option must be in view for user during creation of a reservation.

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## 7. International Requirements

- The callback functionality is the same for U.S., Germany, Ireland, UK and Canada.

## 8. Pre-Conditions

A user has successfully logged onto the computer.

## 9. Post-Conditions

## 10. Extension Points

## 11. Questions

1. Is there anything else needed internationally? *No*
2. Do we want the system to prompt the user to create a callback on every reservation or make it a manual option? *We want to force the user to see the option to create a callback when creating a reservation. When updating a current reservation, create a callback only needs to be an option.*
3. Should the user have the ability to remove an ARMS/RMS callback? *No, only a call center or insurance company should be able to remove this callback.*
4. Does wording need to be consistent with Legacy or GUI? *Leave fields as they are in Legacy. (Adj., Body shop, Service, Renter)*

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.....

*(continued)*

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DATE	TIME	NAME	ADDRESS	CITY	STATE	ZIP
12/15/78	10:30	JOHN	1234	NEW YORK	NY	10001
12/16/78	11:00	JANE	5678	LOS ANGELES	CA	90001
12/17/78	11:30	JOHN	9012	CHICAGO	IL	60601
12/18/78	12:00	JANE	3456	HONOLULU	HI	96801
12/19/78	12:30	JOHN	7890	PHOENIX	AZ	85001
12/20/78	13:00	JANE	2345	PORTLAND	OR	97201
12/21/78	13:30	JOHN	6789	SEATTLE	WA	98101
12/22/78	14:00	JANE	0123	MINNEAPOLIS	MN	55401
12/23/78	14:30	JOHN	4567	ST. LOUIS	MO	63101
12/24/78	15:00	JANE	8901	KANSAS CITY	MO	64101
12/25/78	15:30	JOHN	2345	INDIANAPOLIS	IN	46201
12/26/78	16:00	JANE	6789	COLUMBIA	SC	29201
12/27/78	16:30	JOHN	0123	MEMPHIS	TN	38101
12/28/78	17:00	JANE	4567	NASHVILLE	TN	37201
12/29/78	17:30	JOHN	8901	ATLANTA	GA	30301
12/30/78	18:00	JANE	2345	MAINTENANCE	GA	30301

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## Revision History

Date	Version	Description	Author
<5/14/2001>	<1.0>	<Initial Draft>	<J. Gaines>
5/18/2001	1.1	Revisions based on internal review. Elimination of first repeat renter search screen.	J. Gaines
5/22/2001	1.2	Revisions based on feedback from user review with Jon and Mary: Single match no longer populates into renter info screen without being selected first. Cancel feature is now quit and exit and quit returns to Home instead of search screen.	J. Gaines
5/23/2001	1.3	Doc imported into Req Pro and requirements are marked.	J. Gaines
9/6/01	1.4	Changed wording from Telephone Number to Phone Number.  Changed wording from Account Search to Search.	L. Moellman
10/10/2001	1.5	Removed requirements related to Save and Continue functionality	James Atteberry

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# Use Case Specification: <ECARS 2.0 Reservation>

## 1. Create Reservation

### 1.1 Brief Description

This use case describes how a user is presented with options for creating a reservation; the repeat renter search, the add new renter and the applicable areas in which to record and save information about the reservation with at least the minimum reservation criteria.

## 2. Flow of Events

### 2.1 Basic Flow

2.1.1 The user chooses to create a new reservation.

2.1.2 The system defaults the location to the Group and Branch number where the user logged in.

2.1.3 The system assigns a unique reservation number to the reservation. (See Special Requirements).

2.1.4 The system displays the following criteria for the user to search on:

- Last Name (implied wildcard search)
- First Name (first name can only be used as a search criteria in conjunction with last name)
- Phone Number (will search home, work, other)
- Driver's License Number
- Date of Birth

2.1.5 The system displays the option to add a new renter to this reservation . If the user selects to Add New Renter, the use case continues at alternative flow (New Renter).

2.1.6 For the basic flow, the user will enter last name and phone number as the search criteria.

2.1.7 The user initiates the search.

2.1.8 The system validates the search criteria entered. If only a last name was entered as the lone search criteria, the use case continues at (Last Name Only). If only a date of birth was entered as the lone search criteria the use case continues at alternative flow (Date of Birth Only.)

2.1.9 The system searches for repeat renters in the repeat renter database, based on the criteria entered by the user.

2.1.10 The system retrieves all renter names and associated data that is stored for that renter that are associated with the search criteria entered. If no matches exist the use case continues at alternative flow (No Matches). If multiple matches exist, the use case continues at alternative flow (Multiple Matches). If the search takes longer than the prescribed time the use case continues at alternative flow (Quit). If there is a do not rent warning attached to the repeat renter profile, the use case continues at alternative flow (Renter Warning)

2.1.11 The system displays the single match retrieved from the repeat renter database.

The user has the option to do the following:

- The user selects the repeat renter record match from the list and the use case continues at alternative flow (One Match).
- Does not select the repeat renter match from the list, the use case continues at alternative flow (Add New Renter).
- Quit and the use case continues at alternate flow (Quit) . (Note: Not all renter profiles contain all data. The system will populate the data it has stored in the repeat renter profile).



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2.1.11.1 The renter info fields are populated with the information retrieved, for the renter chosen, from the repeat renter database. The remaining renter information fields are displayed empty for the user to enter new renter information. (A list of available fields can be seen at 2.2.2.2)

2.1.12 The user has the option to continue the use case at the following alternative flows to perform any of the following options or combination of options:

- Add a New Renter (add renter information).
- Change Location
- Add a Pick-up Method
- Add a Pick-up and/or a Return Date.
- Add Additional Drivers
- Add a Bill-To
- Add a Referral Source.
- Add Renter's Vehicle/Shop Information.
- Quote Rates
- Add Insurance Detail
- Add Cash Qualification
- Add Directions
- Add Notes
- Create a Callback
- Print

2.1.13 The user has the option to "Complete Reservation" or Quit. If the user chooses to Quit the reservation the use case continues at alternative flow (Quit).

2.1.14 The system validates that the user has captured the minimum required information of Last Name, otherwise the use case continues at Alternative Flow (Incomplete Reservation)

2.1.15 The system generates and stores the following information:

- Date and Time of Creation
- Employee ID of the employee who created the reservation

(Note: This reservation can be viewed at a later time by utilizing various areas within the system).

2.1.16 The use case ends.

## **2.2 Alternative Flows**

### **2.2.1 Change Location (pick up branch, return branch or both)**

2.2.1.1 The user is allowed to change branch location only (for reservation pilot) within default group. (Note: ECARS 2.0 enhancement will allow change of group dependant upon security.)

2.2.1.2 The system will display the following information to the user:

The Pick up and return group and branch will default to the physical location of the terminal but will be able to be changed by the user. When the user selects the drop down list the system will display all of the rental branches for the group, with the current location highlighted.

2.2.1.3 The window will also display the following information to the user:

- Branch address
- Phone number
- Days of normal operation
- Hours of normal operation

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This information will be read only. If a branch is not open a particular day the appropriate status will be displayed. The branches time zone will be visible as well as an indicator as to if the branch accepts after hour pickups and returns.

2.2.1.4 From the basic flow ( ), the user can change location by changing the Group and Branch number, or the user can change location by changing just the Branch number by selecting to Change GPBR. (See Special Requirements for rules of changing pick up and return branches)

2.2.1.5 The use case continues at ( ) in the basic flow.

## **2.2.2 Add New Renter**

2.2.2.1 The user chooses to add a new renter reservation.

The renter info fields are populated with the current criteria entered in renter search. If there is no search criteria entered, there will be nothing populated in the renter info fields. The remaining renter information fields are displayed empty for the user to enter new renter information:

- **Most commonly entered information (North America):**

- Last Name
- First Name
- Hm Phone
- Wk Phone
- Extension
- Other Phone
- Phone Description

- **Most commonly entered information (U.K.):**

- Last Name
- First Name
- Hm Phone
- Wk Phone
- Extension
- Other Phone
- Phone Description

- **Less commonly entered information (North America):**

- Address
- Zip
- Country
- City
- State
- Other Address
- Employer
- License Number
- Expiration Date
- State Issued
- DOB (Date of Birth)
- SSN
- Height – Feet Height –
- Inches
- Weight
- Hair Color
- Eye Color

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Primary Payment Method is part of the above list but will not be implemented until E2

- Less commonly entered information (U.K.):Address (A 2nd renter address field is added in U.K.)
  - Postal Code
  - Country
  - City
  - County
  - Other Address
  - Employer
  - Licence Number (note difference in spelling)
  - Expiration Date Issuing Authority DOB (Date of Birth)
  - National ID
  - Height – Feet (NOT CAPTURED IN U.K.)
  - Height – Inches (NOT CAPTURED IN U.K.)
  - Weight (NOT CAPTURED IN U.K.)
  - Hair Color (NOT CAPTURED IN U.K.)
  - Eye Color (NOT CAPTURED IN U.K.)

Note: Primary Payment Method (note: "check" is spelled "cheque") is part of the above list but will not be implemented until E2. Renter has the option of initiating any of the following options:

- Enter data for above listed fields
- Cash Qualification
- Insurance Detail
- Update Repeat Renter
- Direction
- Notes

(Note: Cash qualification, directions, notes and insurance detail are alternative flows that initiate the Renter use case)

2.2.2.3 User enters renter's last name.

2.2.2.4 Use case continues at ( ) of the basic flow.

2.2.3 One Match From the basic flow, the system displays the single match under the following headers to the user:

- Renter First and Last Name
- Street Address
- City
- Home Phone
- Office Phone (and extension)
- Other Phone
- Date of Birth

2.2.3.2 The search results are displayed in the following sort order:

- Alphabetically by renter's last name.

2.2.3.3 The user has the option to do the following:

- The user selects a repeat renter record from the list and continues at ( ) of the basic flow.
- Not to select a repeat renter from the list, the use case continues at alternative flow (Add New Renter).
- Search again

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**2.2.4 No Match** From the basic flow ( ), the system displays a zero result set with a message indicating no matches found and the continues at (renter search) of the basic flow, otherwise the user has the option to add a new renter and the use case continues at (Add New Renter).

### **2.2.5 Multiple Matches**

2.2.5.1 The system retrieves multiple repeat renter records that have an exact match on the criteria entered by the user.

2.2.5.2 The system displays a list of all of the repeat renter records that match the information that was input under the Renter Search criteria. The system will make distinguishable any renter that appears on the Do Not Rent List. If the user selects one of these DNR renters the use case continues at Alternative Flow (Renter Warning). The system displays the following information to the user:

- Renter First and Last Name
- Street Address
- City
- Home Phone
- Office Phone (and extension)
- Other Phone
- Date of Birth

2.2.5.3 The search results are displayed in the following sort order:

- Alphabetically by renter's last name.

2.2.5.4 The user has the option to do the following:

- The user selects a repeat renter record from the list and continues at ( ) of the basic flow.
- Not to select a repeat renter from the list, the use case continues at alternative flow (Add New Renter).
- Search again

### **2.2.6 Last Name Only**

2.2.6.1 If last name is the only search criteria entered, the system will prompt the user with an error message to enter additional search criteria and the use case continues at ( ) of the basic flow..

### **2.2.7 Search by Renter's First Name**

2.2.7.1 The user enters a renter's first name. The system searches for a match on the text, starting from the first position in the field. (There is an implied wildcard at the end of the character set entered but no leading or imbedded wildcards within the character set). (Note: First name field is disabled until a valid value is entered in the last name field).

### **2.2.8 Date of Birth Only**

2.2.8.1 If date of birth is the only search criteria entered, the system will prompt the user with an error message to enter additional search criteria and the use case continues at ( ) of the basic flow.

### **2.2.9 Quit**

2.2.9.1 The user uses the quit function to confirm that they do not wish to save any of the information that has been entered for a reservation since the last save.

2.2.9.2 The system prompts the user with a dialog box stating that the reservation will not be saved and asking if the user would like to exit the reservation without saving any of the information

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entered.

2.2.9.3 The use case continues at Reservation Home.

## **2.2.10 Incomplete Reservation**

2.2.10.1 The system displays a message notifying that the user has not captured the minimum required information necessary (Renter's Last Name) to create a reservation.

(Note: The user cannot move the message box to the side and attempt to navigate any area on the screen to enter required information. They must click "OK" to dismiss the message box and enter the required information.)

## **2.2.11 Renter Warning**

2.2.11.1 The system displays a renter-warning window when a renter who is on warning is selected. These fields are display only.

2.2.11.2 The default setting on the window is do not rent. The user can select to override the do not rent by selecting rent.

- If the user selects do no rent, the system returns the user to Reservation Home.
- If the user chooses to rent, then the user returns to the reservation area and the renter's information is populated from the repeat renter database into their appropriate reservation fields and a system note should be generated and viewable in the notes area.

## **2.2.12 Add a Pickup and Return Date**

2.2.12.1 The Create Reservation use case initiates the Renter use case.

## **2.2.13 Add Cash Qualification**

2.2.13.1 The Create Reservation use case initiates the Renter use case.

## **2.2.14 Add Insurance Detail**

2.2.14.1 The Create Reservation use case initiates the Renter use case.

## **2.2.15 Add a Pick Up Method**

2.2.15.1 The Create Reservation use case initiates the Renter use case.

## **2.2.16 Add Additional Drivers**

2.2.16.1 The Create Reservation use case initiates the Renter use case.

## **2.2.17 Add Notes**

2.2.17.1 The Create Reservation use case initiates the Renter use case.

## **2.2.18 Add Directions**

2.2.18.1 The Create Reservation use case initiates the Renter use case.

## **2.2.19 Add a Bill-To**

2.2.19.1 The Create Reservation use case initiates the Create reservation with a Bill-To use case.

## **2.2.20 Create a Callback**

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2.2.20.1 The Create Reservation use case initiates the Create reservation with a Bill-To use case.

## 2.2.21 Add a Referral Source

2.2.21.1 The Create Reservation use case initiates the Create Reservation with a Referral use case.

## 2.2.22 Add Vehicle/Shop Information

2.2.22.1 The Create Reservation use case initiates the Referral use case.

## 2.2.23 Quote Rates

2.2.23.1 The Create Reservation use case initiates the Quote a Rate use case.

## 2.2.24 Add Additional Products/Taxes and Surcharges.

2.2.24.1 The create reservation use case initiates the Taxes use case

## 2.2.25 Print

2.2.25.1 The create reservation use case initiates the Print use case

## 2.2.26 Void

2.2.26.1 The Create reservation use case initiates the Edit Reservation use case.

## 2.2.27 Edit

2.2.27.1 The Create Reservation use case initiates the Edit Reservation use case.

## 2.2.28 Estimate charges

2.2.28.1 The Create Reservation use case initiates the Perot Pricing Engine use case

## 3. Special Requirements for Create Reservation UC

3.1.1 Requirements for the GUI Reservation number generator are as follows:

- The first character will be a numeric value and not start with a zero
- At least one of the characters other than the first character must be an alpha
- Only these values will be used for GUI reservation numbers (BCDFGHJKLMNPQRSTVWXYZ – 0123456789)
- All letters will be displayed in upper case

**RENGUID – Rental GUI Transaction Database** Please refer to use case table for requirement example.

Row #	Unique Key	GP	BR	GUI Reservation Number	ECARS/ARMS Reservation Number
1	123456781	01	01	1B0000	112233
2	123456782	01	01	1C0000	
3	123456788	01	01	B00000	

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4	111222333	01	01	123456	123456
5	111122222	14	22	123456	123456
6	222111333	32	02	794568	794568

- 
- Row 1 is an example of a reservation initially taken in GUI, sent to ECARS/ARMS, and then updated in ECARS. If a reservation is initially taken in GUI, the GUI database will not have the ECARS/ARMS reservation number unless it is updated by the ECARS/ARMS application.
  - Row 2 is an example of a reservation initially taken in GUI and never updated by ECARS/ARMS.
  - Row 3 is an example of a reservation initially taken at NatRes and brought into Rental GUI through AI's API.
  - Row 4, 5, 6 are examples of a reservation initially taken in ECARS/ARMS and then interfaced to Rental GUI. The fifth and sixth rows depict that all Groups' reservations will be stored in a single database on the GUI application.

### 3.2 **Edit Requirement**

The data displayed in the populated reservation fields for the repeat renter search is editable.

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### 3.3 Saving Requirements.

The system displays the Saved Reservation confirmation box . If the minimum reservation information has not been captured, the use case continues at Alternative Flow (Incomplete Reservation).

(Note: The Saved Reservation confirmation box confirms to the user that the reservation has been saved permanently to the database and that the user has captured the required information necessary to create a reservation. No reservation information is saved permanently to the database until a Save is initiated by clicking on the "Complete Reservation" button and the minimum required information necessary to create a reservation has been captured).

The system saves the reservation to the database.

The Saved Reservation confirmation message will be displayed. The message displays the current Reservation number of the record selected that was saved . The record's information is saved to the database and a system note is created capturing:

### 3.4 Fields in the repeat renter file:

- Renter First and Last Name
- Street Address
- City
- State
- Zip code/Postal Code
- Home Phone
- Office Phone (and extension)
- Driver License Number
- Driver License State
- Date Of Birth
- Date Last Rented

## 4. **Pre-Conditions**

4.1 The user has successfully logged onto the system.

## 5. **Post-Conditions**

## 6. **System Generated Notes - Create**

6.1 When a reservation is created, the system will generate the following note text, "Reservation Created".

## 7. **Extension Points**

## 8. **Q's**

- Are we allowing the user to update repeat renter information? Yes
- Do we want the user to be returned to renter search after electing not to rent on a DNR warning? Res Home
- Save and Exit should take the user where? Res Home
- Zero result set on renter search. Do we want to go to res info screen and populate with search criteria entered or do want to search again? Res Home



<Enterprise Rent A Car>

## ECARS 2.0 Reservation

### Use Case Specification: <Daily Reservation Detail>

## Version <1.0>

[illegible]

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## Revision History

Date	Version	Description	Author
<04/17/01>	<1.0>	<Initial draft of Daily Planning Use Case>	<J. Gaines>
4/19/01	1.1	Special Requirement details added to flows	J. Gaines

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# Use Case Specification: <Daily Reservation Detail>

## 1. Daily Reservation Detail

### 1.1 Brief Description

This use case describes the view of a day's reservations to aid in the daily planning process for reservations. The daily activity view is a manually refreshable list of the current day's reservations for a group and branch. No-show reservations are no longer displayed by the system in the Daily Reservation List and are now displayed in a No-Show list.

### 2.1 Basic Flow

2.1.1 The Reservation Planning use case initiates the Daily Activity use case when the user chooses view the Daily Reservation list. The system defaults the location to the Group and Branch Number where the user logged in. {If the user changes location, the use case continues at alternate flow (Change Location)}.

2.1.2 The system checks the current date and time and retrieves the default group/branch reservations that have a pickup date equal to the branch's current local date and all reservations with no date. If no reservations are retrieved, the use case continues at alternate flow (No Records)

2.1.3 The system displays the Daily Reservation List as the daily activity default. The system displays to the user the results according to the following headers and sort order for the default group and branch only:

#### Column Headers for Daily Reservation List:

- Time
- Name
- Pick up Method
- Pick up Location
- Car class
- Preference
- Rental Type

#### Sort order for Daily Reservation List:

- Reservations with a date but no time.
- Reservations with a date and time.
- Reservations with no date but have a time.
- Reservations with no date and no time.

**Note:** Group, Branch and Date are retrieved by the system but not displayed.

2.1.4 The system displays the Daily Reservation List to the user so the following is visible and highlighted to the user:

- Reservations with a pick up date and time up to 30 minutes prior to the current date and time.
- The reservations with a pick up date and time equal to the current date and time.

2.1.5 The system can be refreshed by the user and checks the branch's current local date and time then retrieves and displays any new reservations\* that have a creation date equal to the branch's current local date. These new reservations will display in a manner that make them distinguishable from the other reservations already in the list.

\*A new reservation is one that:

- Natres reservations that are sent during the current day.

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- ARMS reservations sent during the current day.
- Branch reservations that are created during the current for the current day.
- Reservations that are transferred from another branch for the current day.
- Reservations that are moved from another day to the current day within the same branch.
- Reservation for the current day that's time has been changed during the current day.

2.1.6 The system checks the current date and time and retrieves the default group/branch reservations that have a pickup date equal to the branch's current local date and all reservations with no date

Any reservations with a pickup date of 1 day through 5 days prior to the current day will be displayed in the no-show list.

These reservations are displayed in their appropriate place in the reservation list according to the default sort order.

2.1.7 The user can perform the following options:

- If the user chooses to print the list, the use case continues at alternate flow (Print the list)
- If the user elects to print the details of a reservation from the list, the use case continues at alternate flow (Print the reservation details).
- If the user selects a reservation from the list to edit/view, the use case continues at alternate flow (Edit/View a reservation).
- If the user chooses to view the reservations for a different date, the use case continues at alternate flow (Change Date).
- If the user chooses to view the reservations for a different location, the use case continues at alternate flow (Change Location)
- If the user chooses to view the no-show reservations, the use case continues at alternate flow (View No-Shows)

**Note:** User may perform any combination of the above options.

2.1.8 The use case continues at (2.1.4) of the basic flow.

## **2.2 Alternative Flows**

### **2.2.1 Reservation Search**

Link

2.2.1.1 The user elects to search for a reservation from the Daily Activity panel.

2.2.1.2 Initiate Reservation search use case.

### **2.2.2 View No-Shows**

Link

2.2.2.1 The user chooses to view the no show reservations for the default group/branch.

2.2.2.2 The system will retrieve all daily reservations that match the default group/branch for a date and time 1 day through 5 days prior to the branch's current local date and time. If the system retrieves no reservations, the use case continues at alternate flow (No Records).

2.2.2.3 The system displays a list of reservations according to the Daily Reservation list sort order and column headers. The reservations will display in descending date and time order. If the system retrieves no reservations, the use case continues at alternate flow (No Records).

2.2.2.4 Reservations that are in the no-show list have been displayed there by the system after 1 calendar day has passed after the reservations pickup date.

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- Date
- Time
- Name
- Pick up Method
- Pick up Location
- Car class
- Preference
- Rental Type

#### Sort order for No-show Reservation List:

- Reservations with a date but no time.
- Reservations with a date and time.
- Reservations with no date but have a time.
- Reservations with no date and no time.

2.2.2.5 The system removes reservations from the no-show list 6 calendar days after the reservation pick up date.

2.2.2.6 From within no-show list the user can perform the following options:

- If the user chooses to print the list of no-show reservations, the use case continues at alternate flow (Print the list)
- If the user elects to print the details of a no-show reservation from the list, the use case continues at alternate flow (Print the reservation details). \*
- If the user selects a no-show reservation from the list to edit/view, the use case continues at alternate flow (Edit/View a reservation).

### **2.2.3 Change Location**

2.2.3.1 The user is allowed to change location to view a branch's daily reservation list.

2.2.4 From the basic flow (2.1.3), the user can change location by changing either the group number or the branch number or both.

2.2.5 The user selects the branch drop down list from the detail screen.

2.2.6 The system will display the rental branches for the group, defaulting to the current location.

2.2.7 The user selects a branch from the drop down list.

2.2.8 The system will display a view of the selected branch's daily activity for reservations and the use case continues at (2.1.2) of the basic flow.

### **2.2.9 Change Date**

2.2.9.1 The user is allowed to change date as far into the future and past as the system allows, to view a daily reservation list. Note: the ability to edit a reservation for another branch is dependant upon security.

2.2.9.2 The use case continues at (2.1.2) of the basic flow.

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## 2.2.10 No Records

2.2.10.1 The system displays a zero results list display and the use case continues.

## 3. Special Requirements - Daily Reservation Detail UC

1. As in Search Reservation use case, Column Headers are sortable.

2. Types of reservations not shown in the default group/branch daily reservation list are as follows:

- Voided reservations .
- Reservations transferred to another branch .
- Reservations that have been attached to an open ticket.

3. When looking at lists of reservations, the total number of reservations for the day should be displayed.

4. Refresh will be manual refresh. Business does not want refresh to interrupt work in an application. Should not refresh while scrolling through a reservation list. Should not refresh so as to be noticeable by the user while working in an application .

5. Manual refresh of reservation displays – The screen will be refreshed when the user chooses "Refresh". The screen will also refresh after the user leaves and then reenters a reservation display.

7. In the alternate flow (Pick up Summary screen), from the pick up summary display, the user should be able to click on the time and "hyperlink" to that time in the Daily Reservation list.

## 4. Pre-Conditions

4.1 The user has successfully logged onto the system.

## 5. Post-Conditions

5.1 < Post-condition One >

## 6. Extension Points

6.1 <Name of Extension Point>

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# **<ECARS 2.0 Reservation>** **Use Case Specification: <Edit Branch/ARMS/NATRES** **and Void>**

**Version <1.0>**  
**Draft**



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## Revision History

Date	Version	Description	Author
<7/20/01>	<1.0>	<details>	<J. Gaines>

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# Use Case Specification: <Edit Branch/ARMS/NATRES and Void>

## Edit Branch/ARMS/NATRES and Void

### 1.1 Brief Description

This use case describes the edit process and field behaviors and dependencies when editing a branch reservation, an ARMS reservation and a NATRES reservation. Void rules for reservations are also included.

### Pre-Conditions

- 1.2 The user can enter the reservation for editing from all points of entry into reservation.
- 1.3 The system is able to determine what kind of reservation the user is editing (branch, arms, natres, internet)
- 1.4 The system is able to determine whether a reservation is for the group of the physical terminal location or from another group.

#

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**Figure 1: Driver Screen:**

## Branch Reservation Edit

### 1.5 Update

- Update button will be removed.

### 1.6 Clear

- Clear button will be removed.

### 1.7 Driver Fields

#### 1.7.1 Name:

- If last name is deleted, the user cannot save the reservation. No edit rules for first name in reservation.
- If the user selects Update and the driver's last name and/or first name is changed, no driver associated information fields are cleared.

#### 1.7.2 Phone Numbers:

- If Work Number is deleted, the extension will blank out.
- If Other Phone is deleted, type will reset to blank.

#### 1.7.3 Address:

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- No edit rules for deleting or changing address in reservation.

#### 1.7.4 Driver's License Fields:

- If a driver's license number is added then the state issued, expiration date and DOB fields need to be entered as well.
- If a driver's license number is edited, none of the other license fields need to be changed or blanked out by the system.
- If any of the four driver's license fields are deleted, the other driver's license information that is entered remains, but upon saving the reservation, the system will alert the user to the missing piece(s) of driver's license information.

#### 1.7.5 Primary Payment Method:

- No edit rules exist for changing primary payment method in reservation.

**Figure 2: Referral Screen:**

**Reservation : 411781**

**Referral Source**

Account

Account Name:  Account Number:

Contact Name:

Employee:

**Referral Detail**

Bavarian, Inc	Account Number:	G08799
8374 Olive	Account Type:	Corporate
Address line 2	Owning Gp/Br:	0101
St. Louis, MO 63132	Contact Phone:	3144691770

## 1.8 Referral Fields

### 1.8.1 Account Name:

- If account name is changed (to a valid account), account number will change appropriately and the contact name will now be "select".

### 1.8.2 Account Number:

- If account number is changed, the account name will change appropriately and the contact name

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will now be "select".

### 1.8.3 Employee Number:

- There are no edit rules for reservation on changing or deleting an employee number.

### 1.8.4 Contact Name

- If contact name is deleted, an error message will be displayed to the user to add a contact name upon complete reservation.

**Figure 3: Rates/Dates Screen (Top portion):**

Car Class	Daily		Weekly		Monthly		Hourly		Mileage Charge	No Charge
	Rate	Mileage	Rate	Mileage	Rate	Mileage	Rate	Mileage		
ECAR	15.99	150	59.99	750	179.99	1500	5.99	0.15		<input type="checkbox"/>

## 1.9 Date Fields

### 1.9.1 Pick up Date:

If a pickup date/time already exists in a reservation:

- If the pick up date is deleted, the pick up time is also blanked.
- If the pick up date is changed, the new date follows the same rules for entering pickup date.
- If pick up date is entered and it is after the return date the user will receive an error message that pick up date is after the return date and the correction must be made by the user.

### 1.9.2 Pick Up Time:

- If the pickup time is changed, the new time must meet the same rules for entering pickup time.

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### 1.9.3 Pickup Method:

- If the pick up method is changed, the location will remain.

### 1.9.4 Return Date:

If a return date/time already exists in a reservation:

- If the Return date is deleted, the return time is also blanked.
- If the return date is changed, the new date follows the same rules for entering return date.
- If return date is entered and it is before the pick up date, the user will receive an error message that return date is before the return date and the correction must be made by the user.

### 1.9.5 Return Time:

- If the return time is changed, the new time must meet the same rules for entering return time.

### 1.9.6 Return Method:

- If the return method is changed, the location will be blanked out.

## 1.10 Rate Fields

### 1.10.1 Account Name

- If account name is deleted, the account number and rate plan fields will be blanked.
- If the account name is changed, the same guidelines for entering an account name apply. Must choose from dropdown or from search. Once a new account name is chosen, the account number will populate and if there is only one rate plan for that account that will populate as well. If there is more than one rate plan to choose from the rate plan field will display "select".

### 1.10.2 Account Number

- If account number is deleted, the account name and rate plan fields will be blanked.
- If the account number is changed, the same guidelines and validations for entering an account number apply. Once a new account number is chosen, the account name will populate and if there is only one rate plan for that account that will populate as well. If there is more than one rate plan to choose from the rate plan field will display "select".

### 1.10.3 Rental Type

- No business rules for editing Rental type apply in reservation.

### 1.10.4 Rate Plan

- If the user changes the rate plan, "get rates" must be pressed to retrieve the rates for that rate plan.

### 1.10.5 Car Class

- If car class is changed, "get rates" must be pressed to retrieve rates for the new car class entered.
- If car class is deleted and the get rates button is pressed the table of rates for the rate source/plan entered will be displayed. The user has the ability to select a car class from the table.
- If there was no car class originally entered but there were rates entered and the user selects a car class, the rate originally entered will remain unless the user manually types over the rates or selects a car class from the table of rates after choosing get rates.
- Car class may be manually entered with no other rate information.

### 1.10.6 Rates

- Rates May be manually entered without a Rate Source.

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- Rates can be deleted.
- Rates that are edited will remain after the rate source is changed unless a different car class is selected from get rates.
- Hitting Cancel after getting rates will keep rates.

**Figure 4: Rates/Dates Screen (Middle Portion):**

Reservation: 411781

**Rates/Dates**

Rates

Car Class	Daily Rate	Daily Mileage	Weekly Rate	Weekly Mileage	Monthly Rate	Monthly Mileage	Hourly Rate	Hourly Mileage	No Charge
ECAR	15.99	150	59.99	750	179.99	1500	5.99	0.15	<input type="checkbox"/>

Billing Cycle:  Vehicle Preferences:

Products: CDW PAI

Account Details: Hot Line number 1, Hot Line number 2, More, VLF

Discounts and Specials: Add A Special, Start Date, Start Time, End Date, End Time

#### 1.10.7 Billing Cycle

- There are no edit business rules associated with this field in reservation.

#### 1.10.8 CDW

- There are no edit business rules associated with this field in reservation.

#### 1.10.9 PAI

- There are no edit business rules associated with this field in reservation.

**Figure 5: Rates/Dates Screen (Discounts and Specials):**



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## 1.11 Discounts and Specials

### 1.11.1 Add a special

If add a special is unchecked then start date, start time, end date, end time, special rate and mileage remains but the information is ignored by the system.

#### 1.11.2 Start date

- If start date is changed, the system will validate that the start date is not after the end date.
- If there is a pick up date and the user changes the special start date to a date before the pick up date, the system will inform the user that the start date cannot be before the pick up date.
- If there is no pick up date, and the user changes the special start date to a date before the current date, the system will inform the user that the start date cannot be before the current date.
- If the start date is deleted, the system will display a message that a start date must be specified for a special.

#### 1.11.3 End date

- If the end date is changed the system will validate that the end date is not before the start date and provide a message if it is.
- If there is a return date, then the special end date cannot be after the return date, otherwise the system will display a message that the special end date must be equal to or before the return date entered.
- If the end date is deleted, the system will display a message that an end date must be specified for a special.

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#### 1.11.4 Start Time

- No business rule for deleting the start time of a special.

#### 1.11.5 End time

- No business rule for deleting the end time of a special.

#### 1.11.6 Rate

- No business rule for deleting the rate on a special.

#### 1.11.7 Type

- There is no validation on changing the type.

#### 1.11.8 Mileage

- There is no validation on changing or deleting the mileage for a special.

#### 1.11.9 Mileage Type

- There is no validation on changing the mileage type.

#### 1.11.10 No charge

- If there is a mileage charge on the reservation there must be a mileage charge for the special.
- If there is no mileage charge on the reservation there can't be a mileage charge on the special.

#### 1.11.11 Add a discount

- If the add a discount box is unchecked when editing, the discount percent remains but is ignored by the system.
- If the discount box is checked when editing, a discount must be entered.

#### 1.11.12 Discount Percent

- The discount amount can't be changed to over 50% or less than 1%, otherwise the system will inform the user as such. (Discounts must be entered in whole numbers).

### 1.12 ARMS

#### 1.12.1 Protected Fields in ARMS

- If the reservation originated from the ARMS system there are certain fields that will be protected/(not editable by the user). They are as follows:

1. Claim/POL/PO Number
2. Claim Type (C, I, T)
3. Insured's Name
4. Auth By
5. Direct Bill (Y, N)
6. % Auth
7. Max Days Authorized
8. Max Billable Amount
9. Policy Max Amount
10. Daily Max Amount
11. Date of Loss
12. Bill-To Start Date

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13. Bill-To End Date (Auth until Date)
14. Number of Days Authorized
15. Daily Rate Authorized
16. Tax Authorized (Y, N)
17. Car class Authorized
18. Cancellation Date (Last Day Date)
19. Bill-To Account Number (Except if root only is entered then protected once full account number is entered)

#### 1.12.1.1 Editable Fields in ARMS:

(Note: The following editable fields for ARMS reservations follow the same edit rules as the non-arms reservations that were covered above in Driver)

- Driver Last Name
- Driver First Name
- Hm Phone
- Work Phone
- Extension
- Other Phone
- Phone Description
- Driver's Address
- Zip
- County
- City
- State
- Other Address
- Employer
- License Number
- Expiration Date
- State Issued
- DOB
- SSN
- Height
- Weight
- Hair Color
- Eye Color

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### 1.12.2 ARMS Indicator

- Once a user selects an ARMS reservation for editing, the system must know the status of the reservation; contacted, contact attempted or not contacted.
- Before the user will be able to save or exit the reservation, the system will display a message to the user that must be responded to:
  1. Has the renter has been contacted? Yes and No check box or option areas will be displayed.
  2. Has an attempt been made to contact the renter? Yes and No check box or option areas will be displayed.
- If the ARMS reservation that's being edited is in a not contacted state and the user saves, the user responds that contact was attempted and the status of this reservation will change to contact attempted.
- If the ARMS reservation that's being edited is in a not contacted state and the user saves, the user responds that contact was made and the status of this reservation will change to contacted and this reservation will no longer display in the ARMS notification result list.
- If the ARMS reservation that's being edited is in a contact attempted state and the user saves, the user responds that contact was attempted and the status of this reservation will not change.
- If the ARMS reservation that's being edited is in a contact attempted state and the user saves, the user responds that contact was made, the status of this reservation will change to contacted and will no longer display in the ARMS notification result list.
- If the ARMS reservation that's being edited is in a contacted state and the user saves, no message will be saved.

## 1.13 NATRES

### 1.13.1.1 Protected Fields in Natres

- A Branch employee cannot edit a National Reservation originated reservation. If a National Reservation is selected for editing by a branch employee, all fields for the Reservation are view only.
- (See Enhancement #1080 – Ability to Edit Natres Reservations).

### 1.14 Completing after Editing information

- Saving an edited reservation follows the same business rules as saving a created reservation and the same validations occur and informational messages and error messages will display upon committing the edited information to the database.

### 1.15 Void

1. ARMS and NATRES reservations may not be voided by branch personnel.
2. An outside group cannot void branch reservations for a group other than the owning group of the physical terminal signed onto by the user.

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3. For branch reservations, void must be available to the user on all reservation screens.
4. The system must confirm to the user that a reservation is being voided.

## Special Edit Rules

### Post-Conditions

#### 1.16 < Post-condition One >

### Extension Points

#### 1.17 <Name of Extension Point>

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# **Enterprise Rent-a-Car**

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## **Rental Redesign/ECARS 2.0**

### **Use Case Specification: Enter Cash Qualification Information**

**Version 1.5**

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## Revision History

Date	Version	Description	Author
05/01/2001	1.0	Initial Draft	David Beebe
05/18/2001	1.1	1 <sup>st</sup> Revision (After break to work on Open Retail Rental Ticket without Payment Use Case)	David Beebe
05/23/2001	1.2	2 <sup>nd</sup> Revision	David Beebe
06/01/2001	1.3	<p>Revisions based upon feedback from user review with Mary and Jon.</p> <ol style="list-style-type: none"> <li>OK/Exit renamed to "Save"</li> <li>Removed Age from the Personal Information Area.</li> <li>Removed Insurance information from Rental Information Area.</li> <li>Removed "Other Items Received" from Rental Information Area.</li> <li>Added Employee Number/password authorization in the basic and alternate flows.</li> <li>Renter Information entered or changed in this form makes changes to the corresponding renter or additional driver information.</li> <li>Added Supervisor's Phone Number to the Rental Personal Information Area.</li> </ol>	David Beebe
06/07/2001	1.4	<p>Revisions based upon feedback from Reservation team.</p> <ol style="list-style-type: none"> <li>Combined Personal and Rental Information Areas into one.</li> <li>Removed the following fields: First Name, Last Name, Social Security Number, Date of Birth, Street Address, Zip/Postal Code, Country, City, State/Province, Other Ownership, Home Phone Number, Work Phone Number, Other Phone Number (and phone type), Previous Address #1 and #2, Previous Employment Information, Spouse Employment Information, Credit Check Information.</li> <li>Also removed the corresponding</li> </ol>	David Beebe

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		<p>Alternate Flows: No Match to Zip/Postal Code, Multiple City Results, Missing Name Information and Invalid Characters.</p> <p>4. Added the following fields: Insurance Company Name, Agent's Name, Agent's Phone Number and Policy Number.</p> <p>5. Password and Employee Name is only required when entering Cash Qualification Information during the Ticket process.</p> <p>6. Take out Supervisor's Phone Number. (Todd Shylanski 6/13/01)</p>	
06/21/2001	1.5	<p>1. Removed the following fields: Insurance Company Name, Agent's Name, Agent's Phone Number and Policy Number</p> <p>2. Added (Blank) as an option for the following fields: Ownership Rented Previously Do You Own a Car?</p>	David Beebe
09/7/01	1.6	Changed wording from Telephone Number to Phone Number.	L. Moellman



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# Use Case Specification: Enter Cash Qualification Information

## 1. Enter Cash Qualification Information Use Case

### 1.1 Brief Description

This use case will describe how the user and the system interact to input cash qualification information concerning renters and/or additional drivers. It will show the flow of events that occur when information is input and/or selected in this area.

## 2. Flow of Events

### 2.1 Basic Flow

#### 2.1.1 Cash Qualification Information Area

The Enter Cash Qualification Information Use Case begins when the system displays the area for entry and selection of information about the person being cash qualified and the rental. The fields in this area are:

- How Long at the current address:
  - Years
  - Months
- Ownership:
  - (Blank)
  - Own
  - Rent
- Current Employer
- Position
- Supervisor's Name
- Spoke to Whom
- How Long at Current Job:
  - Years
  - Months
- Reason for Renting
  - Car In Shop
  - Weekend
  - Vacation
  - Other
  - Other Reason Field
- Previously Rented:
  - (Blank)
  - Yes
  - No
  - If So, When?

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- Do You Own a Car?:
  - (Blank)
  - Yes
  - No
- Reference #1
  - First Name
  - Last Name
  - Phone Number
  - Relationship
- Reference #2
  - First Name
  - Last Name
  - Phone Number
  - Relationship
- Reference #3
  - First Name
  - Last Name
  - Phone Number
  - Relationship
- Password
- Employee Number

*There are no default values for any of the above fields.*

#### 2.1.2 *Option to Cancel*

The system displays the option for the user to cancel/exit . At any point during the entry of cash qualification information the user could decide to cancel out of the entry process at which time the use case would continue at alternate flow Cancel/ Exit.

#### 2.1.3 *Option to Save*

The system displays the option to Save. At any point during the entry of cash qualification information the user could decide to Save, at which time the use case would continue at basic flow Save.

#### 2.1.4 *Address and Ownership Information Selection*

The user can select how long the person being cash qualified has lived at the current address. The user can also select whether the person being cash qualified owns or rents.

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### 2.1.5 *Employment Information Entry and Selection*

- The user can enter the employment information about the person being cash qualified. They can enter the employer, the supervisor's name, the person being cash qualified employment position and whom the user spoke to when verifying.
- The user can also select how long the person being cash qualified has been employed at their current job.

### 2.1.6 *Rental Information Entry/Selection*

- The user can select one or more reason(s) for renting. If the user selects the "other" option, the field for entry of information becomes available for entry. The user then enters the reason.
- The user can select whether the person being cash qualified has rented before. If the user selects "Yes", the field for entry of information about when they last rented becomes available. The user then enters when the last rental was. (See Special Requirements for note.)
- The user can select whether the person being cash qualified owns a car.
- The user can enter the insurance company name, agent's name, agent's phone number and the policy number information about the person being cash qualified.

### 2.1.7 *References Information Entry*

For all three references listed, the user can enter the First Name, Last Name, Phone Number and Relationship.

### 2.1.8 *"Approved by:" Employee Number and Password Entry*

The user enters the Employee Number and password that approved the cash qualification.

### 2.1.9 *Select Save Option*

The user selects the option to Save.

### 2.1.10 *Validation of Employee Number and Password*

The system validates the Employee Number and password that approved the cash qualification. If the user entered an invalid employee number and password combination the use case continues at alternate flow Invalid Employee Number and Password Combination. If the user entered an employee number and password that does not pass authority check the use case continues at alternate flow Authority Check Failed.

### 2.1.11 *Save*

The system saves all the information entered or selected in the fields of the Cash Qualification.  
The saved information would include the following:

- How Long at the current address:
  - Years
  - Months
- Ownership:
  - (Blank)

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- Own
- Rent
- Current Employer
- Position
- Supervisor's Name
- Spoke to Whom
- How Long at Current Job:
  - Years
  - Months
- Reason for Renting
  - Car In Shop
  - Weekend
  - Vacation
  - Other
  - Other Reason Field
- Previously Rented:
  - (Blank)
  - Yes
  - No
  - If So, When?
- Do You Own a Car?:
  - (Blank)
  - Yes
  - No
- Reference #1
  - First Name
  - Last Name
  - Phone Number
  - Relationship
- Reference #2
  - First Name
  - Last Name
  - Phone Number
  - Relationship
- Reference #3
  - First Name
  - Last Name
  - Phone Number
  - Relationship
- The employee who selected to save the cash qualification information.

2.1.12 End

The Use Case ends.

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## 2.2 Alternative Flows

### 2.2.1 Cancel/ Exit

2.2.1.1 The user selects the option to cancel/exit.

2.2.1.2 The system displays a feedback message warning that the cash qualification data will be lost if the user selects to cancel/exit.

2.2.1.3 The system displays the following options:

- Yes: to exit and lose data.
- No: return to the cash qualification use case.  
(The default option will be No: return to cash qualification.)

2.2.1.4 The user selects Yes the use case ends. If the user selects No then continue in basic flow at the point where the user selected to cancel/exit.

### 2.2.2 Invalid Employee Number and Password Combination

2.2.2.1 The system displays a feedback message that the entered Employee Number and password is invalid.

2.2.2.2 The system prompts the user to enter a valid Employee Number/password.

2.2.2.3 The user selects to enter a valid Employee Number/password and returns to "Approved by" Employee Number and Password Entry.

### 2.2.3 Authority Check Failed

2.2.3.1 The system displays a feedback message that the employee is not allowed to authorize cash qualification.

2.2.3.2 The system prompts the user to enter a valid Employee Number/password.

2.2.3.3 The user selects to enter a valid Employee Number/password and returns to "Approved by" Employee Number and Password Entry.

## 3. Special Requirements for Renter Cash Qualification Information

### "Do You Own a Car" Text Fields

These fields could be left blank; there is no validation to make sure information was entered.

### Previously Rented Text Field

The user can enter whatever they want to. They could enter things like "Last summer", "A few months ago". They could also enter date information like "April 2000" or a more formal date like "04/24/2001". The field could also be left blank; there is no validation to make sure information was entered.

### Password and Employee Number

The system requires password and employee number verification when cash qualification

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information is entered during the open ticket process. The system will not require password and employee number verification during the reservation process.

#### 4. Pre-Conditions

A user is already authorized through a login process to access the panel that is necessary to:

- Create or edit a reservation.
- Open, edit or close a rental ticket.

#### 5. Post-Conditions

#### 6. Extension Points

#### 7. Questions

**Question:** How should the Employee Number Approval field work? Should this field be:

1. Automatically populated (and display only) based upon the user that is currently logged on and opening the ticket? (This assumes person opening ticket is also doing the cash qualification.)
2. Automatically populated based upon the user that is currently logged on and opening the ticket but able to be changed? (This assumes person opening ticket is also doing the cash qualification but also allow changes.)
3. Blank upon initial entry and allow entry of any employee (valid) number? (No assumptions about who is doing the cash qualification.)
4. Blank upon initial entry and have security to authorize employee number? (This way a manager could "authorize" a cash qualification with security.)

**Answer:** Since Cash Qualification information is a serious matter, the input from Jon and Mary is that the last choice is what they wanted. The user will need to enter a valid employee number and update code combination. However this will only be required for an open ticket.

**Question:** What European requirements are there?

**Answer:** Jon Jouris has indicated there could be translations for the U.K., Germany etc. Fields could be eliminated or labels could be changed.

As of 06/01/2001: once the feedback from the review has been integrated, an electronic copy of this document will be forwarded to the proper parties for European requirements and translations.

**Version 1.3**



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## Revision History

Date	Version	Description	Author
05/21/2001	1.0	Initial Draft	David Beebe
06/01/2001	1.1	Revisions based upon feedback from user review with Jon and Mary. 1. Employee Number is no longer an entry field: the system populates this field based upon the user in the active session.  2. OK/Exit renamed to "Save"  3. Selection of the Save option does not provide a feedback message to make sure they want to do that.  4. Moved validation of date to after the "Save" step. <i>(In HTML, Date Validation occurs after form submittal.)</i>	David Beebe
06/26/2001	1.2	Added (Blank) as an option for the following fields: <ul style="list-style-type: none"><li>• Liability</li><li>• Assigned Risk</li><li>• Lienholder Policy</li></ul>	Dave Beebe
06/28/2001	1.3	Revisions to match the Screen Action Spec document.  1. Removed the employee number gathered insurance information field.  2. Moved the insurance company employee that verified insurance information field.  3. Switched order of Comprehensive Deductible and Collision Deductible fields.  4. Removed Special Requirement that Employee Number field is available for edit.	David Beebe
9/7/01	1.4	Changed wording from Telephone Number to Phone Number.	L. Moellman
10/26/01	1.5	Revised to match Screen:  Deleted option to Save and Cancel.  Reworded option to Exit to match screen and added an option Complete.	L. Moellman

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1. The purpose of this document is to provide a detailed description of the use case for the project. It is intended to be used as a reference for the development team and to ensure that all requirements are met.

#

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## Use Case Specification: Enter Renter's/Additional Driver's Insurance Information

### 1. Enter Renter's/Additional Driver's Insurance Information Use Case

#### 1.1 Brief Description

This use case will describe the interaction that occurs between a user and the system when the user inputs and selects details pertaining to the insurance information about a person who is a renter or additional driver.

### 2. Flow of Events

#### 2.1 Basic Flow

##### 2.1.1 Insurance Detail Area

The Enter Renter's/Additional Driver's Insurance Information Use Case begins when the system displays the area for entry and selection of insurance information about the person who is a renter or additional driver. The fields in this area are:

##### Information about the Insurance Company

- Carrier
- Agent
- Phone Number
- Name of Insurance Company Contact
- Policy Number
- Expiration Date

##### Information about the renter's or the additional driver's insurance

- Comprehensive Deductible
- Collision Deductible
- Liability?
  - (Blank)
  - Yes
  - No
- Assigned Risk?
  - (Blank)
  - Yes
  - No
- Lienholder Policy?
  - (Blank)
  - Yes
  - No

##### 2.1.2 Option to Exit

The user has the option Exit the panel. At any point during the entry of insurance information the user could decide to exit out of the entry process at which time the use case would continue at alternate flow Exit.

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### 2.1.3 Company and Insurance Detail Information Area Entry

The user can enter information in the following fields: the name of the Carrier, the name of the Agent, Phone Number, Insurance Company Contact, Policy Number, Expiration Date, the Collision Deductible amount and the Comprehensive Deductible amount. The user can also select the available choices for Liability, Assigned Risk, and Lienholder Policy. There are no default values for any of the above fields.

### 2.1.4 Select Complete Option

The user selects the option to Complete the reservation.

### 2.1.5 Validation of Date

The system validates the value in the Expiration Date field. If the Date value is not valid because it does not exist (for example 02/30/02) the use case continues at alternate flow Invalid Date. If the Date value is not valid because the Expiration Date is prior to current date the use case continues at alternate flow Expired Policy Date.

### 2.1.6 Validation of Information Entry

The system validates that if information is entered in any one of the following fields, that all of the other fields listed also have information entered in them:

- Carrier
- Insurance Company Contact
- Policy Number
- Expiration Date
- Collision Deductible
- Comprehensive Deductible
- Liability: Yes/No

If the system determines that any of the above fields are missing information, the system will present the user with a feedback message as to what fields are not filled to complete Insurance Information. The system will display the option for the user to proceed back to Company and Insurance Detail Information Area Entry in the basic flow to complete entry.

### 2.1.7 Complete

The user selects to complete the reservation .

The system saves all the information entered and selected in the fields of the of this use case flow and completes the reservation . This would be:

- Carrier
- Agent
- Phone Number
- Insurance Company Contact
- Policy Number
- Expiration Date
- Comprehensive Deductible
- Collision Deductible
- Liability?: (Blank).Yes. No
- Assigned Risk?: (Blank).Yes. No
- Lienholder Policy?: (Blank).Yes. No

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#### 2.1.8 *End*

The Use Case ends.

### 2.2 Alternative Flows

#### 2.2.1 Exit

2.2.1.1 The user selects to Exit the additional driver information panel.

2.2.1.2 The system displays a message that asks you if you want to save the reservation before exiting.

#### 2.2.2 Invalid Date

2.2.2.1 The system displays a feedback message that the Date is invalid.

2.2.2.2 The system prompts the user to correct the Date that is invalid.

2.2.2.3 The user selects to correct the Date and the use case proceeds back to Company and Insurance Detail Information Area Entry in the basic flow.

#### 2.2.3 Expired Policy Date

2.2.3.1 The system displays a feedback message that the policy has expired.

2.2.3.2 The system prompts the user to :

- Correct the policy expiration date.
- Exit the Insurance Information Entry process.

2.2.3.3 If the user selects to change the expiration date the use case proceeds back to Company and Insurance Detail Information Area Entry in the basic flow. If the user selects to exit the open ticket process the use case continues at alternate flow Cancel / Exit.

### 3. **Special Requirements – Enter Renter's/Additional Driver Insurance Information.**

### 4. **Pre-Conditions**

A user is already authorized through a login process to access the panel that is necessary to:

- Create or edit a reservation.
- Open, edit or close a rental ticket.

### 5. **Post-Conditions**

### 6. **Extension Points**

### 7. **Questions**

**Question:** In the Employee Approval of the Renter's Insurance Information area should there be further security? (for example: update code). Or can the user just input the employee number and have the system save it as long as it is a valid employee?

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**Answer:** No further security is needed. The employee number information will be automatically populated into the correct field. This field is display only and the information in it cannot be changed.

**Question:** What European requirements are there?

**Answer:** Jon Jouris has indicated there could be translations for the U.K., Germany etc. Fields could be eliminated or labels could be changed.

As of 06/06/2001 an electronic copy of this document had been sent to Jon Jouris so that he can pass it on to the appropriate European personnel for feedback.

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# Rental Redesign/ECARS 2.0 Use Case Specification: Notes

Version 1.7



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## Revision History

Date	Version	Description	Author
6/14/01	1.0	Initial Draft	M. Pallia
6/25/01	1.1	First Draft	D. Beebe
6/27/01	1.2	<p>Revisions after meeting and getting feedback from Maribeth, Mike P. and Jackie L.</p> <p>Changes are:</p> <ul style="list-style-type: none"> <li>• Rewriting for clarification.</li> <li>• Restated Brief Description.</li> <li>• Explained that Notes is accessed via a reservation or ticket.</li> <li>• Added detail to "Notes Summary"</li> <li>• Pulled sort orders and defaults from Special Requirements and back into document.</li> <li>• Added Questions to be asked of the business.</li> </ul>	D. Beebe
06/28/01	1.3	<p>Revisions after feedback in meeting with Marty Tichy.</p> <p>Changes are:</p> <ul style="list-style-type: none"> <li>• Date and Time combined since they are saved in the Notes database as one field.</li> <li>• Multiple users should be able to view the same note or notes. However only one at a time can edit. (This is application wide standard and does not belong in use case.)</li> </ul> <p>This is the version sent to Mary and Jon for the User Review on 7/2</p>	David Beebe

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7/5/01	1.4	Revisions based upon feedback from Mary and Jon. Changes are: <ul style="list-style-type: none"> <li>• Add Status (Reservation, Open and Close) to Summary</li> <li>• Change available Note Types to System, Callback and Internet Shop. Shop, Bill-To and Renter will be available in a later enhancement.</li> <li>• Removed from Add Note Sub Flow the ability for the user to select the Note Type. All Notes currently added will be "Callback" type.</li> <li>• Added the ability to Print a particular note or the entire summary list.</li> </ul>	David Beebe
9/4/01	1.5	Updated use case so that it matches the version in the Open Ticket repository. <ul style="list-style-type: none"> <li>• Updated Note Types</li> <li>• Added info to supplemental requirements that indicate what date and time display when viewing a saved note.</li> </ul>	David Beebe #
9/5/01	1.6	Changed default value from "Callbacks" to "Manual".	David Beebe
11/9/01	1.7	Removed all requirements for "Print Current Page."	David Beebe
11/28/01	1.8	Updated list of Note Types	David Beebe

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# Use Case Specification: Notes

## 1. Notes Use Case

### 1.1 Brief Description

This use case describes how the user interacts with the system to view all notes associated to a ticket or reservation, select to view certain types of notes, add a new note or view the full details of a previously entered note.

## 2. Flow of Events

### 2.1 Basic Flow

#### 2.1.1 Selection to View Notes

The Notes Use Case begins when the user navigates to the Notes area of a reservation or ticket. This could take place at any point in the reservation and ticket process. (Notes can be viewed at any point in the ticket process: when creating a reservation, editing the reservation, opening a ticket using the reservation, editing the open ticket, closing the ticket and after the ticket is closed. Notes will carry forward from a reservation to a ticket when a ticket is opened using the reservation.)

#### 2.1.2 System Searches for Notes

The system searches for and retrieves all notes associated to the reservation or ticket .

#### 2.1.3 System Displays Notes Summary

The system displays the notes to the user in a summary list. On initial entry to the Notes Summary List the system will display all notes, regardless of type, sorted from the newest to the oldest by date and time. The columns displayed to the user are the following:

- Date and Time (when the note was saved)
- Note
- Status
  - Reservation
  - Open
  - Close
- Note Type
  - All
  - Bill To
  - Callback
  - Manual
  - Renter
  - Reservation
  - Shop
  - System
- Created By
- ARMS message status:
  - (Blank)
  - Sent

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#### 2.1.4 Option to Add Note, View Note Detail, Print Notes and change displayed Note Types

The system displays the options to select to:

- Add a new note to the reservation or ticket.
- View a single note that had been previously entered.
- Print (either the Current Page or All Notes)
- View notes of a particular Type

#### 2.1.5 Add Note, View Note Detail and View Summary Based Upon Note Type Subflows

Depending on user preference, he or she will use one of the following three sub-flows: Add Note, View Note Detail and View Summary Based Upon Note Type . More commonly, the Add Note Sub-flow is used. If the user selects to print all Notes (regardless of Note Type and Status) the use case continues at alternate flow Print All Records.

### 2.2 Add Note Subflow

#### 2.2.1 Select to Add Note

The user selects to add a Note to the reservation or ticket. (A Note can be added at any point in the ticket process: when creating a reservation, editing the reservation, opening a ticket using the reservation, editing the open ticket, closing the ticket and after the ticket is closed.)

#### 2.2.2 Add Note Information Area

The system displays the area for the user to enter the Note. (Enhancement proposed for the future: System also displays the area for the user to select the Note Type. The possible Note Types are: Shop, Bill-To and Renter.)

#### 2.2.3 Option to Save and Option to Cancel

The system displays the option to:

- Save
- Cancel
- Print All Records

At any point during the Add Note process the user could decide to exit at which time the use case would continue at alternate flow Cancel. (If the user cancels without making an entry, no feedback message will be displayed.)

#### 2.2.4 User Entry of Note

The user enters the note.

#### 2.2.5 User Selects Option to Save

The user selects to Save.

#### 2.2.6 Validation Note was entered

The system validates that a note has been entered. If the system determines a note was not entered, the use case will continue at alternate flow No Note.

#### 2.2.7 Save Add Note information

The system saves the note. This system also saves information from the following areas:

- Date and Time
- Note

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- Status
- Note Type of "Manual"
- Created By

The user will not be able to select the Note Type, date & time, Status and the "Created By" party. These items are determined and populated by the system. (As stated above, future proposed enhancements will allow the user to select the Note Type.)

#### 2.2.8 End

The system closes the Add Note area and the use case ends.

### 2.3 View Note Detail Subflow

#### 2.3.1 Select to View Note

The user selects to view the details of a single, previously entered note within the summary list of notes for the selected reservation or ticket.

#### 2.3.2 View Note Detail Area

The system displays the Note Detail showing:

- Date and Time
- Note
- Note Type
- Created By
- ARMS message status :

#### 2.3.3 Option to Close View Note Area

The system displays the option to close the area that displays the details of a particular note. The system also displays the options to print the current Note.

#### 2.3.4 User Selects Option to Close the Viewed Note

The user selects to close the View Note Detail area. If the user selects to print the current Note the use case continues at alternate flow Print Note.

#### 2.3.5 End

The system closes the View Note Detail area and the use case ends.

### 2.4 View Summary Based Upon Note Type Subflow

#### 2.4.1 Select to View Summary Based Upon Note Type

The user selects to the view notes summary of a certain note type.

#### 2.4.2 Display Possible Note Types and Ticket Status to sort from

The system displays the list of possible Note Types to select to sort from:

- All
- System
- Internet Shop

(Future Proposed Enhancements will allow the user to select to also sort from Shop, Bill-To and Renter.)

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The system displays the list of possible Ticket Status to Sort From

- All
- Reservation
- Open
- Close

#### 2.4.3 Options to Print

The system displays the option to:

- Print All Notes

#### 2.4.4 User Selects Note Type

The user selects a Note Type they want to view.

#### 2.4.5 System Searches for Notes

The system searches for and retrieves notes associated to the ticket or reservation .

#### 2.4.6 System Displays Notes Summary

The system displays the notes to the user in a summary list. The columns displayed to the user are the following:

- Date and Time
- Note
- Note Type: based upon the type the user selected
- Created By
- ARMS message status

#### 2.4.7 Print

If the user selects to print all Notes (regardless of the currently displayed Note Type) the use case continues at alternate flow Print All Notes.

#### 2.4.8 End

The use case ends.

### 2.5 Alternative Flows

#### 2.5.1 No Note

##### 2.5.1.1 The system displays a feedback message: "Please enter a Note if select ing to Save."

##### 2.5.1.2 The user has the option to:

- Enter the note
- Exit the Add Note process

##### 2.5.1.3 If the user selects to enter the note, use case proceeds to User Entry of Note in the Sub Flow "Add Note". If the user selects to exit the Add Note process the use case ends.

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### 2.5.2 Cancel

2.5.2.1 The system displays a feedback message: "Are you sure you want to exit and lose the entered information?"

2.5.2.2 The user has the options:

- Yes (exit and lose the information)
  - No (return to the use case at the point where the user selected to exit from.)
- The default option will be "No".

2.5.2.3 If the user selects to exit the Add Note process, the use case proceeds to System Displays Notes Summary in the Basic Flow . If the user selects No, the use case proceeds to User Entry of Note in the Add Note Subflow.

### 2.5.3 Print All Notes

2.5.3.1 The system initiates the Print Use Case.

2.5.3.2 The use case returns to the point where the user initiated the print function.

### 2.5.4 Print Note

2.5.4.1 The system initiates the Print Use Case .

2.5.4.2 The use case returns to the point where the user initiated the print function.

## 3. Special Requirements for Notes

- Previously entered notes may not be edited or deleted by the user.
- ystem generated and manually entered) will be displayed based upon the date and time of the physical terminal location of the user viewing the notes.

## 4. **Pre-Conditions**

- A user is authorized through a login process to create or edit a reservation or ticket.
- The user has accessed a reservation or ticket, either in the process of editing or creating.

## 5. **Post-Conditions**

## 6. **Questions**



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**<Company Name>**

---

**<ECARS 2.0 Reservation>**  
**Use Case Specification: <Quote a Rate>**

**Version <2.2>**

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## Revision History

Date	Version	Description	Author
<05/08/01>	<1.0>	<Simplified version w/ ECARS 1.0 wrapper>	<J. Gaines>
5/11/01	2.0	Rewritten after SA reviews	J. Gaines
5/12/01	2.1	Added European Sub-flow	J. Gaines
5/13/01	2.2	Add baseline and differences to baseline for UK, Ireland and Germany.  Add a new section for Functionality to be included in future scope.	J. Gaines
7/18/01	2.3	Requirement was added to Display VLF	M. Pallia
9/7/01	2.4	Changed wording from Telephone Number to Phone Number.  Added new section to give the ability to add free text on the Car Class.	L. Moellman

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## Use Case Specification: <Quote a Rate>

### 1. Quote a Rate

#### 1.1 Brief Description

This use case will describe how a user interacts with the system to search for and retrieve a single rate or set of rates for a source, using the following Dates/Rates search criteria; rate source, rental type, rate type and car class. It will show the flow of events that occur when a search is conducted to locate a rate or set of rates. The system will search for and locate a rate or set of rates based on the dates/rates criteria entered by a user using an ECARS 1.0 wrapper. This use case doesn't describe quoting rates using the new VRS from Perot.

### 2. Flow of Events

#### 2.1 Basic Flow

2.1.1 The use case begins when the user chooses to quote a rate.

2.1.2 The system determines the pick up Group and Branch and the pick-up date and time for the reservation. If the Group and Branch is a European location, the use case continues at (UK, Ireland, Germany Subflow). If the Group is within a state that has VLF, the use case continues at alternate (VLF Ranges).

2.1.3 The system displays all dates/rates criteria fields, allowing the user to enter specific search criteria as can be seen in Table A. Differences, by country, can be seen in tables B, C, D, E:

**Table A**

#### **BASELINE SET OF REQUIREMENTS:**

Dates/Rates criteria required to quote a set of rates:

- Pick-Up Branch (defaults to terminal's group and branch)
- Pick Up Date (defaults to current date if no pick up date is entered)
- Rate Source (drop down of valid domain values) or
- Account Number (text entry box).
- Rate Plan (i.e. Internal, warranty, cs pay, etc... from SI)

Additional optional criteria to quote rate:

- Return Date (defaults to one calendar day after pick up date if no date is entered) (Note: Return date is required for UM and Tiered rates)
- VLF Ranges
- Vehicle Preferences
- Billing Type
- Rental Type

(Note: The user may type within the Customer Name, Customer No: (Customer Number), Rate Type, Branch Rates, and (Branch Rates) Rate Type or select from a list.

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**Table B:**

**US and Canadian Differences to Baseline**

**Requirements:**

**Add:**

Car class (valid by car class for Rate Source)

**Or**

View Table of rates. (rates for ALL valid car classes for a rate source.

2.1.4 The user enters a pick-up date (this may have already been entered) and a rate source . If a car class is manually entered, the use case continues at alternative flow (Select a Car Class).

2.1.5 If no pick up date is entered, the system uses a default date of the current date.

2.1.6 The system populates the Rate Source field with values from the following groups: any selected Bill To customers, any selected Referral customers, any selected Shop customers, followed by the branch short list and branch defaults . The branch short list and branch standard rate sources will be combined but placed in alphabetical order. If the pickup branch is a utilization management branch the system will add "Utilization Management" as an additional group to use as a rate source. (See Special Requirements)

2.1.7 The user selects the Rate Source by entering the Customer Number in the Customer Number text entry field. If the user enters the Account name, the use case continues at alternative flow (Account Name). If the user selects from the branch short list, the use case continues at (Branch Short List). If the user selects Standard Rates, the use case continues at alternative flow (Standard Rates). If the user chooses to view the VLF ranges, the use case continues at alternate (VLF Ranges). If the user decides to select a billing cycle, the use case continues at alternate (Billing Cycle)

2.1.8 The non-selected rate source field is populated with the appropriate value by the system . For example if the user enters the Customer Number, the system displays the matching customer name in the Account Name field. If the Account Name is selected a list, that Customer Number is populated in the Customer Number field. (Note: The user may also select any other customer as the Rate Source by entering the Customer Number if known or by selecting to do an advanced search for a Customer.)

2.1.9 If the rate source selected is not found, the use case continues at alternate flow (Rate Source Not on File) . Otherwise, the use case continues along the basic flow.

2.1.10 The user initiates the rate search.

2.1.11 The system uses the ECARS 1.0 Wrapper to search SI for the appropriate rates based on the criteria entered. The system receives the appropriate processing information from the ECARS 1.0 Wrapper.

2.1.12 The system displays the customer number for the rate source, the rental type and the rate type for the rate source entered. If the rate source has multiple rate types that are retrieved, the use case continues at alternate flow (Multiple Rate Types). If the rate source has no rate type, the use case continues at alternative flow (No Rate Type).

2.1.13 The system uses the rate type retrieved for the customer number entered.

2.1.14 The system displays the rate table for that customer based on the group and branch, the rate source chosen, the pick up date, and rate type.

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2.1.15 The system displays the results of the rate search, according to the Default Sort Order, in rate table form to the user. If the search returned no rates, the use case continues at alternate flow (No Rates).

2.1.16 The system displays the rates for the following headers:

Rate                                      Mileage                                      Excess charge

The following rates are displayed under the column headers:

Hourly rate: (Hourly rates are not filled by the system unless turned on when input into CM12)

Daily rate

Weekly rate

Monthly rate

Additional rate information displayed to the user:

Account Details: Special Instructions (as set up within AACM12 on the current ECARS 1.0 system)

- 2 "Hot Lines"
- Discounts
- Rules
- Products

2.1.17 The user can perform the following options:

- The user can select another Rate Source and the use case continues at ( ) of the basic flow.
- The user can select a car class and associated rates from the table to attach to the reservation. The use case continues at ( ) of the basic flow.
- The user can cancel quote a rate and the use case ends.
- The user can enter a vehicle preference and the use case continues at alternate (Vehicle Preferences)
- The user can select a billing cycle type. If the user decides to do this, the use case continues at alternate (Billing Cycle)

2.1.18 The user selects one car class from the table.

2.1.19 The system populates all rates associated with the car class selected on the reservation.

2.1.20 The user has the option to do one of the following:

- The user can select another Rate Source and the use case continues at ( ) of the basic flow.
- The user can select another Rate Type and the use case continues at ( ) of the basic flow.
- The user can view account details . The use case continues at alternative flow (Account Details)
- The user can change a rate . The use case continues at alternative flow (Change a Rate)
- Enter or View Package Specials . The use case initiates the Dates use Case.
- The user can complete the reservation . The use case initiates the Create Reservation use case.

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- The user can cancel quote a rate.
- The user can enter a vehicle preference and the use case continues at alternate (Vehicle Preferences)
- The user can select a billing cycle type. If the user decides to do this, the use case continues at alternate (Billing Cycle)

2.1.21 The use case ends.

## 2.2 UK, Ireland, Germany Subflow

2.2.1 The system displays all dates/rates criteria fields, allowing the user to enter specific search criteria from Table A. Differences can be seen in Tables C, D, E:

**Table A**

**BASELINE SET OF REQUIREMENTS:**

Dates/Rates criteria required to quote a set of rates:

- Pick-Up Branch (defaults to terminal's group and branch)
- Pick Up Date (defaults to current date if no pick up date is entered.
- Rate Source (drop down of valid domain values) or
- Customer Number (text entry box).
- Rate Type (i.e. Internal, warranty, cs pay, etc... from SI)

Additional optional criteria to quote rate:

- Return Date (defaults to one calendar day after pick up date if no date is entered) (Note: Return date is required for UM and Tiered rates)

(Note: The user may type within the Customer Name, Customer No: (Customer Number), Rate Type, Branch Rates, and (Branch Rates) Rate Type or select from the list.

**Table C**

**UK Differences to Baseline Requirements:**

- Entering Rate Source does not retrieve rates.
- Rate Type (Will be added with new VRS)

(Note: UK SI does not currently support the ECARS 1.0 Wrapper for retrieving rates.)

**Table D:**

**Ireland Differences to Baseline Requirements:**

- Entering Rate Source does not retrieve rates.
- Rate Type (Will be added with new VRS)

(Note: Irish SI does not currently support the ECARS 1.0 Wrapper for retrieving rates.)

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**Table E:**

**Germany Differences to Baseline Requirements:**

- Entering Rate Source does not retrieve rates.
- Rate Type (Will be added with new VRS)

(Note: German SI does not currently support the ECARS 1.0 Wrapper for retrieving rates.)

2.2.2 The user enters a pick-up date (this may have already been entered) and may enter a rate source.

2.2.3 If no pick up date is entered, the system uses a default date of the current date.

**(Note:** The user uses the SI programs in ECARS 1.0, as they currently do, to look up the rates for the rate source.)

2.2.4 The user manually enters a rate into the ECARS 2.0 reservation from SI...

2.2.5 The user can perform the following options:

- The user can overwrite the Rate Source and the use case continues at ( ) of the basic flow.
- The user can overwrite the rate entered. The use case continues at alternative flow (Change a Rate)
- View the VLF Ranges. The use case continues at alternate (VLF Ranges).
- The user can complete the reservation. The use case initiates the Create Reservation use case.
- The user can cancel quote a rate .

2.2.6 The use case ends.

## **2.3 Alternative Flows**

### **2.3.1 Account Not Found**

2.3.1.1 The system displays a message to the user letting them know that No Account Matches or records were found.

2.3.1.2 The use case continues at ( ).

### **2.3.2 Branch Short List**

2.3.2.1 The system retrieves and displays the Branch Short list . The columns that are displayed to the user are (from left to right).

- Account name
- Legacy Customer Number
- Account type
- Owning Group and Branch
- Address
- City
- State
- Zip
- Phone Number(s)



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2.3.2.2 The user selects an account from the list.

2.3.2.3 The system retrieves and displays the following information

- Account name
- Legacy Customer Number
- Account type
- Owning Group and Branch
- Address
- City
- State
- Zip
- Phone Number(s)

### 2.3.3 Account Name

2.3.3.1 From the basic flow, the system displays an area with all the fields emptied out so that the user can enter search criteria . The fields that are available are:

- Group. This includes an "All Groups" option.
- Account Name
- Account Phone Number(s)
- Account Type. This includes an "All" option. (See Special Requirements for the list of valid Account Types)

2.3.3.2 The user enters an Account Name and selects "All" as the Account Type.\*

2.3.3.3 The user initiates the search

2.3.3.4 The system validates the search criteria. If only an account type is entered, the system will prompt the user that at least one other criterion must be selected . If only a group is chosen, the system will prompt the user that at least one other criterion must be selected.

2.3.3.5 The system checks the status of the search. If No Account Matches are found, the use case continues at alternate (No Account Matches).

2.3.3.6 The system displays the matches to the user in a summary list . The columns that are displayed to the user are: (from left to right)

- Account name
- Legacy Customer Number
- Account type
- Owning Group and Branch
- Address
- City
- State
- Zip
- Phone Number(s)

2.3.3.7 The user can do any of the following options:

- Select an account from the summary list . If the user chooses this option, the use case continues at ( ) in the basic flow
- Clear the search criteria . If the user chooses this option, the use case continues at ( ) of the Account Name alternative flow.
- Search again . If the user chooses this option, the use case continues at ( ) of the Account Name alternative flow.
- Exit . If the user chooses this option, the use case continues at ( ) in the basic flow.

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### 2.3.4 View Rate for Single Car Class

2.3.4.1 From ( ) of the basic flow, the user chooses to view the rates associated with the rate agreement retrieved by the system for the car class selected.

2.3.4.2 The system displays the results of the rate search for the car class entered, according to the Default Sort Order, in table form to the user.

2.3.4.3 The system displays the rates for the following headers:

Rate                                      Mileage                                      Excess charge

The following rates are displayed under the column headers:

Hourly rate: (Hourly rates are not filled by the system unless turned on when input into CM12)

Daily rate

Weekly rate

Monthly rate

Additional rate information displayed to the user:

Account Details: Special Instructions (as set up within AACM12 on the current ECARS 1.0 system)

- 2 "Hot Lines"
- Discounts
- Rules
- Products

2.3.4.4 The use case ends.

### 2.3.5 Account Details

2.3.5.1 The user chooses to see more details about the selected Customer Account.

2.3.5.2 The system displays an area that shows the following details about the Customer Account:

Account Details (as set up within AACM12 on the current ECARS 1.0 system)

- Account Name
- Account Number
- Account Type
- Address
- City
- State
- Zip Code
- Phone Number (all phone numbers associated)

2.3.5.3 The user is done looking at the information and the use case continues at ( ) within the basic flow.

### 2.3.6 Change a Rate

2.3.6.1 After a rate is selected by the user and populated into the rate quoted field by the system, the user has the ability to overwrite the rate in the reservation and the use case continues at ( ) in the basic flow.

### 2.3.7 Multiple Rate Types

2.3.7.1 The system will display a list of rate types for an Account, (as defined in SI) if there are multiple rate types.

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2.3.7.2 The user selects one rate type from the list and the use case continues at ( ) in the basic flow.

### 2.3.8 No Rate Type

2.3.8.1 If there is no Rate Type, the system uses the Standard Rate Source for the selected Rate Source and the use case continues at ( ) in the basic flow. If there are no standard rates for the Rate Source then the use case continues at alternative flow (No Standard rates).

### 2.3.9 No Rates

2.3.9.1 If the account chosen does not have rates (either through an active or inactive agreement), then the system should not return rates. The system will display a message "No rates were found". The use case continues at ( ) of the basic flow.

### 2.3.10 Select a Car Class

2.3.10.1 The system makes available, valid classes determined by location and the combination of rate source / rate type.

2.3.10.2 To select a vehicle class, the user chooses a vehicle class from the list displayed or the user may enter data in a text entry box. As characters are entered that match available vehicle classes, the list is positioned to the class that matches the characters entered. (Note: Only one class can be selected.)

2.3.10.3 The system populates rates with values that match the car class/rate source/rate type chosen. Mileage is defaulted appropriately, and the appropriate billing cycle is defaulted.

(Note: Mileage columns either display the word "UNLIMITED" and the Mileage Extra Charge column is populated with appropriately formatted zeros or the Mileage column may have whole numbers which represent the number of miles free for that per and the Mileage Extra Charge column has an properly formatted amount.)

2.3.10.4 The user has the ability to add free text on the car class.

### 2.3.11 VLF Ranges

2.3.11.1 If the Group/Branch is within a VLF Group, the system provides an area for the user to view the VLF Fee Ranges . (NOTE: this function should be available at any point within the Use case)

2.3.11.2 The user chooses to view the VLF Ranges

2.3.11.3 The system retrieves and displays a summary table with the following columns to the user :

- Group Number
- Range For (a list of car classes within the group and "group")
- Daily VLF fee (Broken down by Low, High, Average)

See Example below for table layout

2.3.11.4 The user is done viewing the table, and the use case continues at back in the Basic flow.

## 3. Special Requirements. Quote Rates

(NOTE: 3.1 through 3.1.2 are rules for phase 2. For pilot, the user will enter rental type or select from a list of valid rental types)

3.1 Based on the following rules the rental type is defaulted on the window:

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### 3.1.1 If a Account Rate Source is selected:

<u>Customer Type</u>	<u>Rental Type</u>	<u>Billing Cycle</u>
Employee	Other	24 hour
Insurance	Insurance	Calendar Day
Bodyshop	Bodyshop	Calendar Day
Dealership	Dealership	24 hour
Corporate	Corporate	24 hour
Government	Corporate	24 hour
Fleet	Corporate	24 hour
Other	Other	24 hour

### 3.1.2 If a branch default is defaulted based on customer type or is selected by the user the following rules apply:

<u>Branch Default</u>	<u>Rental Type</u>
Allstate	Insurance
Bodyshop	Bodyshop
Corporate	Corporate
Dealership	Dealership
Employee	Other
Entertainment	Corporate
Fleet	Corporate
Government	Corporate
Insurance	Insurance
Lease Customer	Corporate
Other	Other
Utilization Management	Blank
Retail	Retail

### 3.2 The Logic for SI comments retrieval is the same the ECARS 1.0 Wrapper.

### 3.3 If one billing type in SI (Rate Type in ECARS 2.0) is returned for the customer then the rules listed in the special requirements section should be displayed for that customer. If more than one billing type is returned and the user has not selected the Rate Type yet, than the rules will not be displayed. Once the user has selected the Rate Type the rules associated to that rate type would be displayed.

### 3.4 The available classes are determined by the location and the combination of rate source / rate type. The rate information depends on the rate source, rate type and vehicle class . Not every rate is always available. (This needs to be clarified in a meeting to take place during the week of 6/25)

### 3.5 Mileage columns either display the word "No Charge" and the Mileage Extra Charge column is populated with appropriately formatted zeros or the Mileage column may have whole numbers which represent the number of miles free for that per and the Mileage Extra Charge column has a

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properly formatted amount.

## **Rate Source Drop down behavior:**

### **3.5.1 Multiple Bill-To's**

3.5.1.1 The user enters multiple Bill-to's into the reservation .

3.5.1.2 The system retrieves the first customer selected as the first available Rate Source to be selected in the rate source list, (identified by a customer selection area such as Bill To 1) during the reservation transaction . The use case continues at ( ) of the basic flow.

### **3.5.2 Utilization Management**

3.5.2.1 If there are no Bill To customers and the pickup branch is a utilization management branch, "Utilization Management" is available as the first selection in the rate source drop down list but the user is able to select other sources for use.

3.5.2.2 The user selects the Utilization Management option from the Rate Source list.

3.5.2.3 The utilization management system is checked for the pickup branch. The system uses the start and end date of the rental to determine the appropriate day's (1 Day, 2 Day, 3 Day, or 4 Day) rate to default as the daily rate. When the system checks for UM rates , the User must key in a pick-up date and time as well as a return date and time before the system will populate any UM rates

3.5.2.4 If the user selects the Utilization Management option and both sets of dates and times are not populated the system will display a feedback error message and the use case continues at ( ), otherwise the use case continues at ( ) of the basic flow.

### **3.5.3 Bill-To**

3.5.3.1 If there is a Bill To customer, that customer is defaulted and used for the Rate Source.

3.5.3.2 The user is able to select another rate source. This can be done by selecting another rate source from the drop down, entering a customer number or using the advanced search. (These functions are described in the basic and alternative flows)

### **3.5.4 Referral**

3.5.4.1 If there are no Bill To customers and there is a Referral customer, that referral customer is available as the first selection in the Rate Source drop down list.

3.5.4.2 The user is able to select other customers for use. Default the Customer Number to first selected . (Rate Type box is enabled).

3.5.4.3 If a Source ID (The rate source's name. For example State Farm Insurance-St. Louis is defined prior to the User selecting rates and there is no Bill-To, the source ID should be on the top of the list within the Rate Source drop down box. When the User gets to the Vehicle rates screen, Rate Source will be blank.

### **3.5.5 Shop**

3.5.5.1 If there are no Bill To customers, and there are Referral and Shop customers, the Referral source is available as the first selection in the Rate Source drop down list but the user is able to select other customers for use. Default the Customer Number to first selected. (Rate Type box is enabled).

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### 3.5.6 Not on File Bill-To (9's)

3.5.6.1 If the Bill-to is a Not on File Bill-to (9's type customer), Both Rate Source and Customer Number will be blank and the User will have the option to fill in these areas by using the drop down or search buttons . The use case continues at ( ) of the basic flow

## 4. **Pre-Conditions**

4.1 The user successfully logs onto the application.

## 5. **Post-Conditions**

## 6. **System Generated Notes – Rates**

A note should be generated when any of the following events occur :

Event	Note Text	When To Generate
<u>The Rate Source and/or Account Number are changed</u>	Rate Source “XXXXX” was changed to “XXXXX”	Edit
<u>The Rate Type is changed</u>	Rate Type “XXXX” was changed to “XXXX”	Edit
<u>The Car Class is changed</u>	Car Class “XXXX” was changed to “XXXX”	Edit
<u>After a rate source and car class has been chosen, the user manually changes any of the values populated in the vehicle rate table .</u>	What rate values were changed and what the old and new values are.	Create/Edit

## 7. **Extension Points**

## 8. **Functionality to be included in Future Scope – Quote Rates.**

1. Connectivity to the new VRS (Perot) for UK, Ireland, Germany.
2. The option to view account details in UK, Ireland, and Germany comes with connectivity to the new VRS.
3. Multiple rate types for UK, Ireland, Germany comes with the new VRS.
4. Entering a car class in reservation for UK, Ireland and Germany.
5. Branch Short List for UK, Ireland and Germany will be determined during a meeting to be held during the week of 6/25..
6. Rate Type for UK, Ireland and Germany.
7. Rate source drop down behavior for multiple Bill-To's comes with connectivity to the new VRS for all countries.

## 9. **Current VLF Groups**

- California
  - i. 32
  - ii. 30
  - iii. 54
  - iv. 23
- Hawaii

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This data is stored in Veh\_Lisc\_Fee\_St table on Oracle and VT010P file on Legacy.

## 10. Sample VLF Range Table

Range For	Daily VLF Ranges		
	Low	High	Average
GROUP	.26	2.33	.78
ECAR	.42	.59	.52
CCAR	.39	.73	.59
ICAR	.26	.83	.59
SCAR	.34	.96	.74
FCAR	.40	1.01	.81
PCAR	.64	1.19	.92
LCAR	.50	1.62	.97
LCAR1	.86	1.85	1.59
LTAR	.54	1.13	.88
MVAR	.73	1.16	1.03
XCAR1	.77	1.95	1.43
XXAR	.98	1.92	1.61
XVARP	.81	1.35	1.13
XFAR	.78	1.42	1.16
XFAR1	1.07	2.09	1.38
XPAR	.60	1.11	.89

## 11. J&M Q's

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## ECARS 2.0 Reservation Use Case Specification: Referral

Version 1.5



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## Revision History

Date	Version	Description	Author
06/03/01	1.0	First Draft	M. Pallia
6/6/01	1.1	Revisions based on the input of the Open Ticket team. Revisions included some wording changes as well as the removal of the most common navigation area flow.	M. Pallia
6/7/01	1.2	Changed document to notate that it is Account Name and Legacy Customer Number	M. Pallia
6/8/01	1.3	The following changes were made during the user review: The basic flow was changed from entering a referral number to picking one from the Branch short list. Changed name to Referral from Referral Call. A customer number is a Legacy Customer Number. Search must have 2 criteria unless it is name or phone number. Finally added special requirements 3 thru 6.	M. Pallia
6/12/01	1.4	Added the following requirement:  1) A new contacted cannot be added to a fleet type Account.  Changed the following requirement.  1) During the Search, the user can select one or more account type or an all option.	M. Pallia
6/15/01	1.5	Replaced Legacy Customer Number with Account Number. Added a new section that is called Future Scope that details out the functional areas we will not be delivering for Pilot	M. Pallia
9/7/01	1.6	Changed wording from Telephone Number to Phone Number.  Changed Account Search to Search.	L. Moellman
11/01/2001	1.7	Removed reference to account phone number extension.	James Atteberry

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# Use Case Specification: Referral

## 1. Referral

### 1.1 Brief Description

This use case describes the interactions a user will take when a renter is referred to Enterprise by a promotional discount, an Account, a TV ad campaign or any other method of attracting Renters, or an employee of Enterprise refers a renter (Employees can refer themselves as well).

## 2. Flow of Events

### 2.1 Basic Flow

2.1.1 This use case can be initiated at any point during the Reservation/Open Ticket process.

2.1.2 Depending on the person making the Reservation/Open Ticket, the user will use one of the two sub-flows. More commonly, the Account Referral Sub-flow is used.

### 2.2 Account Referral Sub-Flow

2.2.1 The system displays an area for the user to select an Account from the Branch Short List. The system also gives the user the option to :

- Enter an Account Number. If the user chooses this option, the use case continues alternate (Account Number).
- Search for an Account. If the user selects this option, the use case continues at alternate (Search)

2.2.2 The system retrieves and displays the Branch Short list. The columns that are displayed to the user are (from left to right). If the physical terminal location is in Europe, the use case continues at Alternate (European Branch Short List).

- Account name
- Account Number
- Account type
- Owning Group and Branch
- Address
- City
- State
- Zip
- Phone Number(s)

2.2.3 The user selects an account from the list. If the user does not choose an account from the list, the use case continues at (2.2.1) in the Account Referral Sub-Flow.

2.2.4 The system retrieves and displays the following information

- Account name
- Account Number
- Account type
- Owning Group and Branch
- Address
- City
- State
- Zip
- Phone Number(s)

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- 2.2.5 The user has the option to select an Account contact for the selected account, select a different account or view the Account details of the selected account. If the user chooses to view "The Account Details", the use case continues at alternate (Account Details). If the user chooses to select a different account, the use case continues at alternate (2.2.1) within the Account Referral Sub-Flow.
- 2.2.6 The user chooses to view the list of contacts for the selected account.
- 2.2.7 The system displays the Account Contact list to the user. If there are no Contacts identified for a particular Account, the use case continues at alternate (No Contacts). The column displayed to the user will be the following :
- Name (First Name Last Name)
  - Telephone Number
  - Extension
- 2.2.8 The user has the option to select a contact from the list or add a New Contact. If the user chooses to add a new contact, the use case continues at alternate (Add New Contact).
- 2.2.9 The user selects a contact from the list.
- 2.2.10 The system displays the name of the contact and the contact's phone number to the user . The system also allows the user the ability to change the contact phone number . (NOTE: if the user changes the phone number, it will only save with the transaction. It will not be stored to the reference data) \*
- 2.2.11 From here, the user can navigate to any other area within the Reservation/Open Ticket and the system initiates the Reservation Navigation Use Case
- 2.2.12 The use case ends
- 2.3 Employee Referral Sub-Flow**
- 2.3.1 The system displays an area for the user to perform the following options :
- A field to enter an Employee Number
  - Search for an Employee . If the user chooses to search for an Employee, the use case continues at alternate (Employee Search)
- 2.3.2 The user types in an employee number .
- 2.3.3 The user initiates the search.
- 2.3.4 The system checks the status of the search. If No Employee Matches are found, the use case continues at alternate (No Employee Matches) If the search results in only one match, the use case continues in this Sub-Flow.
- 2.3.5 The system displays the following information to the user
- Employee Name
  - Group and Branch Number – Group and Branch Description
  - Department
  - Title
- 2.3.6 From here, the user can navigate to any other area within the Reservation/Open Ticket and the system initiates the Reservation Navigation Use Case
- 2.3.7 The use case ends

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## 2.4 Alternative Flows

### 2.4.1 Search

2.4.1.1 From the Account Referral Sub-flow, the system displays an area with all the fields emptied out so that the user can enter search criteria. The fields that are available are:

- Group . For reservation pilot, this will be defaulted to the physical terminal location and the user will not be able to change the group . This includes an "All Groups" option.
- Account Name
- Account Phone Number(s)
- Account Type . This includes an "All" option. (See Special Requirements for the list of valid Account Types)

2.4.1.2 The user enters an Account Name and selects "All" as the Account Type .

2.4.1.3 The user initiates the search

2.4.1.4 The system validates the search criteria . If only an account type is entered, the system will prompt the user that at least one other criterion must be selected . If only a group is chosen, the system will prompt the user that at least one other criterion must be selected .

2.4.1.5 The system checks the status of the search . If No Account Matches are found, the use case continues at alternate (No Account Matches).

2.4.1.6 The system displays the matches to the user in a summary list . The columns that are displayed to the user are: (from left to right)

- Account name
- Account Number
- Account type
- Owning Group and Branch
- Address
- City
- State
- Zip
- Phone Number(s)

2.4.1.7 The user can do any of the following options :

- Select an account from the summary list . If the user chooses this option, the use case continues at (2.2.6) in the Account Referral Sub-flow
- Clear the search criteria . If the user chooses this option, the use case continues at (2.5.2.1) of the Search Alternate.
- Search again . If the user chooses this option, the use case continues at (2.5.2.2) of the Search Alternate.
- Exit . If the user chooses this option, the use case continues at (2.2.2) in the Account Referral Sub-flow.

### 2.4.2 Enter an Account Number

2.4.2.1 From the Account Referral Sub-Flow, the user chooses to enter an Account Number.

2.4.2.2 The user types in an Account Number and initiates a search for all the information associated with the entered Account Number .

2.4.3 The system checks the status of the search. If No Account Matches are found, the use case

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continues at alternate (No Account matches). If More than one Account match is found, the use case continues at alternate (More than One Account Match). If the search results in only one match, the use case continues at (2.2.5) within the Account Referral Sub-Flow.

#### **2.4.4 No Account Matches**

2.4.4.1 From the Account Referral Sub-Flow, the system displays a message to the user letting them know that No Account Matches or records were found.

2.4.4.2 The use case continues at (2.2.2) within the Account Referral Sub-Flow.

#### **2.4.5 More Than One Account Match**

2.4.5.1 The system displays a summary list of the matches to the user. The columns that will be displayed in the summary list are (from left to right):

- Account name
- Account Number
- Account type
- Address
- City
- State
- Zip
- Phone Number(s)

2.4.5.2 The user has the option to select an account from the list or to exit. If the user selects an Account from the list, the use case continues at (2.2.6) within the Account Referral Sub-Flow. If the user chooses to exit the list without selecting an Account, the use case continues at (2.2.2) within the Account Referral Sub-Flow.

#### **2.4.6 Account Details**

2.4.6.1 From the Account Referral Sub-Flow, the user chooses to see the details about the selected Account.

2.4.6.2 The system displays an area that shows the following details about the Account :

##### Account Details

- Account Name
- Account Number
- Account Type
- Address
- City
- State
- Zip Code
- Phone Number(s)

##### Special Instructions

- 2 "Hot" lines
- Miscellaneous Information
- Discounts
- Rules
- Products

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2.4.6.3 The user is done looking at the information and the use case continues at (2.2.6) with in the Account Referral Sub-flow.

#### **2.4.7 No Contacts**

2.4.7.1 From the Account Referral Sub-Flow, the system displays a message letting the user know that no contact have been set up for this Account

2.4.7.2 The user can either add a new contact or exit . If the user chooses to add a new contact, the use case continues at alternate (Add New Contact). If the user chooses to exit, the use case continues at (2.2.7) within the Account Referral Sub-flow.

#### **2.4.8 Add New Contact**

2.4.8.1 From the Account Referral Sub-Flow, the system displays an area for the user to enter Contact information . The fields that can be entered are either :

- Last Name
- AND/OR
- First Name

2.4.8.2 The user enters a first or last name and accepts the new contact information entered . If the user chooses to exit, the use case continues at (2.2.7) with in the Account Referral Sub-Flow.

2.4.8.3 The system associates the new contact added to the Account chosen and the use case continues at (2.2.12) with in the Account Referral Sub-Flow.

#### **2.4.9 Employee Search**

2.4.9.1 From the Employee Referral sub-flow, the user chooses to search for an employee .

2.4.9.2 The system displays an area with all the search criteria fields emptied out . The search criteria fields available for the user to enter are :

- Employee Last name
- Employee First name

2.4.9.3 The user enters a Last Name and a First name . If the user enters just a First Name and No Last Name, the use case continues at alternate (First Name Only).

2.4.9.4 The user initiates the search

2.4.9.5 The system checks the status of the search. If No Employee Matches are found, the use case continues at alternate (No Employee Matches).

2.4.9.6 The system displays the matches to the user in a summary list . The columns that are displayed to the user are : (from left to right)

- Employee Name
- Employee Number
- Group and Branch Number – Group and Branch Description
- Department
- Title

2.4.9.7 The user can do any of the following options :

- Select an employee from the summary list . If the user chooses this option, the use case continues at (2.3.5) in the Employee Referral Sub-flow

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- Clear the search criteria . If the user chooses this option, the use case continues at (2.4.8.3) of the alternate (Employee Search).
- Search again . If the user chooses this option, the use case continues at (2.4.8.3) of the alternate (Employee Search)
- Exit . If the user chooses this option, the use case continues at (2.3.1) in the Employee Referral Sub-flow.

#### **2.4.10 First Name Only**

2.4.10.1 From the alternate (Employee Search), the system will display a message to the user that they must enter a last name along with a first name .

2.4.10.2 The use case continues at (2.4.8.3) in the alternate (Employee Search).

#### **2.4.11 No Employee Matches**

2.4.11.1 From the Employee Referral Sub-Flow or the alternate (Employee Search), the system displays that no employees match the criteria entered .

2.4.11.2 The use case continues at (2.1.3) within the Employee Referral sub-flow or (2.4.8.2) in the alternate (Employee Search).

#### **2.4.12 European Branch Short List**

2.4.12.1 From the account referral sub-flow, the system retrieves and displays the European Branch short list. (NOTE: This list is comprised of all accounts that have an owning Group that equals the Group of the Physical terminal's location.) The columns displayed to the user are:

- Account Name
- Account Number
- Account Type
- Owning Group/ Branch
- Address
- City
- State
- Zip
- Phone Number(s)

2.4.12.2 The user selects an account from the list that is displayed .

2.4.12.3 The use case continues at (2.2.4) within the account referral sub-flow.

### **3. Special Requirements – Referral UC**

1. A contact must be selected for every Account that is selected as a Referral. NOTE: This is an Open Ticket requirement only. Reservations do not require a contact.

2. The valid Account Types that are displayed to the user in Search are :

- Body Shop
- Corporate
- Government
- Fleet
- Dealership
- Insurance
- Other



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3. For North America, the Branch Short List is currently being generated from the existing Legacy system and is being stored in a table on the Oracle database .
4. The system should not search or display for any deactivated or deleted accounts .
5. The user must have the ability to cancel a search at any time during the search .
6. An account and contact or an employee number must be selected before the user can complete an open ticket .
7. If a Fleet type Account is selected, the system should not allow the user to add a new contact.
8. The system must allow the user to select one Account Type or "All" during the Search .
9. When a user adds a new contact, that contact must be saved to the database and be available for selection for any future transactions .

#### 4. Future Scope

- The ability to view Account Details. Account Details includes the 2 "Hot Lines", Products, Miscellaneous Information, Discounts and Rules as set up in SI.

#### 5. Pre-Conditions

- 5.1 The user successfully initiated the Create Reservation Use Case

#### 6. Post-Conditions

#### 7. System Generated Notes –Referral

- 7.1 Notes should be generated when any of the following events occur

Event	Note Text	When to generate
<u>The user changes the Referral Account</u>	Referral Account "XXXXX" was changed to "XXXXXX"	Edit
<u>The user changes the referral contact. (The referral account is the same)</u>	Referral Contact "XXXX" was changed to "XXXX" for Referral Account "XXXX"	Edit
<u>The user adds a "not on file" contact</u>	Not on File Contact "First Name, Last Name" was added for Referral Account "XXXXX".	Create/Edit

#### 8. Extension Points

#### 9. Questions

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# **Open Retail Ticket without Payment Use Case Specification: Bill-to Version 2.0**

1. The purpose of this document is to define the use case for the Open Retail Ticket without Payment feature. This document is intended for use by the development team and the testing team.

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## Revision History

Date	Version	Description	Author
12 July 2001	1.0	First draft	Maribeth Concannon
20 July 2001	2.0	Final draft	Maribeth Concannon
22 August 2001	2.1	Updates per changes made during SAS reviews	Maribeth Concannon
9/07/2001	2.2	Changed wording from Telephone Number to Phone Number.	L. Moellman

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## Use Case Specification: Bill-to

### 1. Bill-to

#### 1.1 Brief Description

This use case describes the "Bill-to process" within the context of the ticket or the reservation. The "Bill-to process" is limited here to adding and deleting an account number as a Bill-to, and adding, changing, extending and deleting an authorization.

This use case will encompass all of the requirements that are relevant from ECARS 1.0 as well as those from VRS which are deemed part of the 1<sup>st</sup> phase of ECARS 2.0. This use case only pertains to non-ARMS transactions.

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## 2. Flow of Events

### 2.1 Basic Flow

#### 2.1.1 Add a Bill-to

2.1.1.1 The user navigates, within the Ticket or the Reservation, to the Bill-to area.

2.1.1.2 The system allows the user to indicate who will be billed.

2.1.1.3 The user can search for an account by name or s/he can enter the account number directly.

2.1.1.4 If the user elects to search for the account, the system will first provide a list of the accounts already in use on the ticket or reservation (if applicable) and provide a list of the branch's most commonly used accounts, as determined by the criteria in the branch description in TX01. If the user elects to use an account not in this list, they can search across all of the accounts on file.

2.1.1.5 If there is no account in the system for the intended bill-to, see alternative flow: Account not on file. If the user elects to enter the account number without search, the system must validate the account before proceeding.

2.1.1.6 The user selects a contact. If the contact is not found, the user elects to add one and enters the contact's full name, phone number and phone number. Either the first name or last name is required. This is saved on the ticket / reservation, as well as being added as a contact for the account.

2.1.1.7 The user must select an authorization status.

2.1.1.8 System logs the details in the "Notes".

2.1.1.9 Use Case Ends

### 2.2 Alternative Flows

#### 2.2.1 Remove a Bill-to

2.2.1.1 The user navigates, within the Ticket or the Reservation, to the Bill-to area.

2.2.1.2 The user indicates that s/he wishes to remove a Bill-to.

2.2.1.3 The user selects the Bill-to account number which s/he wishes to remove from among the bill-tos on the ticket or reservation. Any bill-to on the ticket which has at least one ARMS authorization associated to it cannot be removed and therefore shouldn't be presented to the user as an option.

2.2.1.4 The system displays to the user all of the details of any authorizations associated with the Bill-to for that ticket or reservation along with the option to cancel their choice.

2.2.1.5 User elects to continue. If they elect to cancel, the use case ends.

2.2.1.6 The system removes the bill-to from the ticket or reservation as well as any authorizations and all required billing information associated to the bill-to and logs the details in the "Notes".

2.2.1.7 If there are other Bill-tos on the ticket or reservation, and they are a higher number bill-to, then they will be changed to a lower number. (For example, if Bill-to One is Smith Insurance and Bill-to Two is Brown Auto Body, and the user removes Smith Insurance from the reservation/ticket, then Brown Auto Body becomes Bill-to One.)

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2.2.1.8 The use case ends.

## 2.2.2 Add authorization details

The user navigates, within the Ticket or the Reservation, to the Bill-to area .

The user indicates that s/he wishes to add an authorization.

The system presents the user with the following fields:

- Authorization status (Authorized, Pending Authorization, Declined, Terminated, Reimbursed, Pending Call at Open)
- Daily amount of authorization
- Item(s) authorized
- Beginning date and time authorized
- Ending date and time authorized
- Final date of authorization (a.k.a. "Last Day")
- Person from the bill-to organization who gave the authorization.
- Maximum amount of authorization
- Maximum number of days of authorization
- Flat amount of authorization
- "All charges" authorization
- Information required by the bill-to (may be limited by legacy to the existing text fields for the Claim/PO/RO and Insured Name fields).

In order to add an authorization, the user must change the authorization status to "Authorized" and enter the required information, as determined by the situation. (See add daily authorization, add authorization maximums, flat authorization, last day and required information for the details.)

The system automatically enters the details of the authorization into the reservation or ticket notes detailing the Enterprise employee who performed the authorization as well as all of the associated details.

The use case ends.

### 2.2.2.1 Add daily authorization

The user indicates that s/he wishes to add a daily authorization.

User indicates the following:

The amount per day that is authorized.

The item or items to which that amount is to be applied.

Whether or not that amount includes tax or is "plus tax" which allows the tax(es) to be added to the authorization.

The date the authorization is effective. If the billing cycle is 24 hour, then the time is also required. These should default to the date and time that the ticket was opened, or to the date and time of the reservation (if available).

The end date of the authorization or the number of days of the authorization. If the number of days is indicated, then the system will determine the end date. If a 24 hour billing cycle, then the time is also required.

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The name of the person from the bill-to account who made the authorization.

#### 2.2.2.2 Add authorization maximums

The user indicates that s/he wishes to add an authorization maximum.

User indicates the following:

The maximum amount that the bill-to can be billed, the maximum number of days that they can be billed, or both . If they indicate both, the system will apply whichever is the lesser).

The name of the person from the bill-to account who set the maximum.

NOTE: The maximum amount is a flat maximum - there will be no option to indicate an amount + tax, etc...

#### 2.2.2.3 Last Day

User indicates the following:

The date beyond which no charges may be applied to the bill-to . If the ticket or reservation has a 24-hour billing cycle, then the time is required too.

The name of the person from the bill-to account who set the final date.

#### 2.2.3 Change Authorization Amount

2.2.3.1 This allows the user to change an authorization which has already been entered.

2.2.3.2 The user navigates, within the Ticket or the Reservation, to the Bill-to area.

2.2.3.3 The user indicates that s/he wishes to change the amount of an authorization for Bill-to.

2.2.3.4 If the user wants to change an existing amount for dates which have already been authorized, s/he indicates the authorization that s/he wishes to change and changes it. Because ARMS authorizations cannot be changed by the user, the system should not make any ARMS authorizations available to them.

2.2.3.5 The system automatically enters the details of the authorization into the reservation or ticket notes detailing the Enterprise employee who performed the authorization as well as all of the associated details.

2.2.3.6 The use case ends.

#### 2.2.4 Extend Authorization

2.2.4.1 The user navigates, within the Ticket or the Reservation, to the Bill-to area.

2.2.4.2 The user indicates that s/he wishes to extend an authorization for a specific Bill-to. The user should not have any authorizations available to them which are ARMS authorizations.

2.2.4.3 The system presents the user with the end date of the most recent authorization amount and allows them to change it.

2.2.4.4 If the user wishes to change the authorization amount, go to the Change Authorization alternative flow.

2.2.4.5 The user changes the end date to a date later than the date already in the authorization. If they enter a date which is the same as the date already entered, then the use case ends.

2.2.4.6 If the user attempts to change an end date for an authorization which has been "Last Dayed".



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then the system presents the user with an informational message and asks them to confirm the change. If they confirm, then the Last Day Date is updated accordingly. The authorization status remains "Terminated".

2.2.4.7 The system automatically enters the details of the authorization into the reservation or ticket notes detailing the Enterprise employee who performed the authorization as well as all of the associated details.

2.2.4.8 The use case ends.

2.2.5 "Last Day" authorization

2.2.5.1 The user navigates, within the Ticket or Reservation, to the Bill-to area.

2.2.5.2 The system provides the option to indicate that the end date of the authorization is final and cannot be changed. If the authorization is an ARMS authorization, this option is not available and the use case ends.

2.2.5.3 The user elects to make the end date of the authorization the LAST DAY.

2.2.5.4 The system automatically changes the authorization status to "Terminated" and enters the details of the authorization into the reservation or ticket notes detailing the Enterprise employee who performed the LAST DAY authorization as well as all of the associated details.

2.2.5.5 The use case ends.

2.2.6 Remove Authorization

2.2.6.1 The user navigates, within the Ticket or Reservation, to the Bill-to area.

2.2.6.2 The user indicates that s/he wishes to remove a single authorization for a specific Bill-to. If the authorization is an ARMS authorization, this option is not available and the use case ends.

2.2.6.3 The system presents an option to the user to cancel their choice, along with all of the details of the authorization they selected. The details include which item(s) the authorization applies to and the amount and dates covered.

2.2.6.4 User elects to continue. If they elect to cancel, the use case ends.

2.2.6.5 If the authorization they selected to remove is the only one on the ticket or reservation for that Bill-to, then the system requires changes the authorization status to "Declined" but allows the user to change the authorization status to "Pending".

2.2.6.6 The system automatically enters the details of the authorization removal into the reservation or ticket notes detailing the Enterprise employee who performed the authorization as well as all of the associated details.

2.2.6.7 The use case ends.

2.2.7 Remove all authorizations for a Bill-to Account

2.2.7.1 The user navigates, within the Ticket or Reservation, to the Bill-to area.

2.2.7.2 The user indicates that s/he wishes to remove all authorizations for a specific Bill-to by changing the authorization status to "Declined". If the authorization is an ARMS authorization, this option is not available and the use case ends.

2.2.7.3 The system presents an option to the user to cancel their choice, along with all of the details of

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the authorizations. The details include which item(s) the authorizations apply to and the amounts and dates covered.

2.2.7.4 User elects to continue. If they elect to cancel, the use case ends.

2.2.7.5 The system automatically enters the details into the reservation or ticket notes detailing the Enterprise employee who performed the authorization as well as all of the associated details.

2.2.7.6 The use case ends.

2.2.8 Account not on file

2.2.8.1 The user navigates, within the Ticket or Reservation, to the Bill-to area.

2.2.8.2 The user indicates that s/he wishes to bill an account which is not in the system.

2.2.8.3 The system presents fields to enter the name of the account, the billing address information, phone number and name of a contact for that account. All of the information is required. The address entry should follow the system standards which allow for the user to enter the zip code and address and have the system search for the appropriate city and state. If many city, state combinations are valid, the user should be allowed to select from them.

2.2.8.4 The user completes all of the information. If they omit any part of the information and try to continue, the system provides a feedback message indicating which information is missing. The system allows the user to update those items.

2.2.8.5 The system does not add this account to the account database.

2.2.8.6 The system automatically enters the details of the addition of the "Not on file" account into the reservation or ticket notes detailing the Enterprise employee who performed the action as well as all of the associated details.

2.2.8.7 The use case ends.

2.2.9 Adding Required Billing Information

2.2.9.1 The user navigates, within the Ticket or Reservation, to the Bill-to area.

2.2.9.2 The user indicates that s/he wishes to add "Required Billing Information"

2.2.9.3 The user indicates the account for which they want to add or update the information. Any information associated with bill-tos on the ticket which have at least one ARMS authorization associated to it cannot be changed and therefore, those accounts shouldn't be available to the user.

2.2.9.4 The system makes the Claim/PO/RO and the Insured Name fields available for edit.

2.2.9.5 If the account has listed at least one of these fields as required and/or that specific formatting is necessary, then the system indicates which field(s) is required and/or the format that the information must be in (if specified).

2.2.9.6 The user enters as much information as is available. (The information isn't required until the ticket is closed.)

2.2.9.7 The system automatically enters the details of the information, into the reservation or ticket notes detailing the Enterprise employee who performed the edit as well as all of the associated details.

2.2.9.8 The use case ends.

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### 3. **Special Requirements – Bill-to**

#### 3.1 **Number of users**

Only one user should be allowed to update authorization information on a ticket or reservation at a time.

Only one user should be allowed to add or remove bill-to account numbers on a ticket or reservation at a time.

#### 3.2 **Callbacks**

Any update to authorizations should be taken into account by the callbacks engine in generating callbacks to renters and Bill-tos.

#### 3.3 **Help**

If help text will be made available to the users, some explanation of why ARMS-authorized bill-tos are treated differently will be necessary.

#### 3.4 **Authorization by car class**

When the user is adding an authorization amount, they must be allowed to look up the amount using a car class. Furthermore, if the retrieved rate is tiered, then the user must have the option either to select one of the rates or to indicate that the authorization is tiered and thereby associate all of the rates to the authorization.

#### 3.5 **ARMS authorization**

Only one ARMS authorized account can be on a ticket/reservation at a time.

If a bill-to account receives an ARMS authorization and it is not in the bill-to ONE position, it must be changed to bill-to one and the other bill-tos must follow it. Therefore, if bill-to one is Joe's Body Shop (non-AMRS) and bill-to two is Allstate (ARMS) and Allstate sends an initial ARMS authorization, it becomes bill-to one and Joe's Body Shop becomes bill-to two.

### 4. **Pre-Conditions**

#### 4.1 **User logged In**

The user must be logged in to the reservation or ticket system.

### 5. **Post-Conditions**

#### 5.1 **None**

### 6. **Extension Points**

#### 6.1 **None**

### 7. **Questions**

#### 7.1 **Rate source**

How is adding a bill-to (or removing one) expected to impact the reservation or ticket's rate source? If no impact, should a message be provided to the user?

#### 7.2 **European requirements**

European requirements still need to be documented. When will these be available?

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### 7.3 ARMS

Can the user change any Bill-to information on an ARMS ticket?

### 7.4 System generated notes

What details should be included in each note?

### 7.5 Name of authorizer

Should this name be free-form text or should a list of contacts for the account be used? If a list is optimal, then do omit the contact for "Not on File" bill-tos?

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## Use Case Specification: Vehicle/Shop

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## Revision History

Date	Version	Description	Author
07/10/2001	1.0	First Draft	D. Beebe
07/12/2001	1.1	Revisions based upon feedback from meeting with Mike P. and Jackie L.	D. Beebe
7/16/2001	1.2	<p>Revisions based upon feedback from Mary S. and Jon J.</p> <ul style="list-style-type: none"> <li>• "Accident" changed to "Damage."</li> <li>• Removed steps for user choosing to search for make and model. <ul style="list-style-type: none"> <li>◦ Once a user selects a Year the list of possible models are displayed.</li> <li>◦ Once a user selects a Make the list of possible models is displayed.</li> </ul> </li> <li>• Removed requirement that the user must select full (year, make, model) renter vehicle information.</li> <li>• Removed enabling the "Other Make", "Other Model" and "Other Color" fields based upon selecting "Other" in the "Make", "Model" and "Color" fields.</li> </ul>	D. Beebe
7/17/2001	1.3	<p>Combined the Renter's Vehicle and Shop Use Cases back together.</p> <p>(In the GUI ECARS and the Functional Specs these two areas were combined. However when Ciber worked on the baseline code they were separated. Based upon feedback from Mary and Jon for ECARS 2.0 Renter's Vehicle and Shop were merged.)</p>	D. Beebe
7/24/2001	1.4	Updated "Add New Contact" to say that a user may enter the last and/or first name. The requirement previously stated that both were needed.	D. Beebe
7/30/2001	1.5	Added to Supplemental Requirements. Included all of the situations that the system should generate a note.	D. Beebe

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8/2/2001	1.6	<ol style="list-style-type: none"> <li>1) Added domains for "Type of Loss"</li> <li>2) Added to Supplemental Specs that the system should generate a note when the user changes the renter's vehicle.</li> </ol>	D. Beebe
8/3/2001	1.7	<ol style="list-style-type: none"> <li>1) Added alternate "European Branch Short List" when selecting a Shop.</li> <li>2) Added German Vehicle and Class information alternate flow.</li> </ol>	D. Beebe
8/8/2001	1.8	Revision based upon feedback from Jon Jouris. Vehicle Notes will only be viewable from this screen and will not be saved to Notes.	D. Beebe
8/9/2001	1.9	<p>Revisions based upon feedback from Chris Carr</p> <ol style="list-style-type: none"> <li>1. Default values of drop downs is "Blank"</li> <li>2. Removed step to search for full account information after selection as shop: system already did this in previous step.</li> <li>3. Removed viewing full account details.</li> <li>4. When selecting a "Not on File" account, added functionality to get city and state from zip/postal code.</li> </ol>	D. Beebe
8/16/2001	2.0	<ol style="list-style-type: none"> <li>1. Changed telephone to phone.</li> <li>2. Corrected one change missed in version 1.4.</li> <li>3. The user can only select one type of loss.</li> <li>4. Removed exit option from No Contact alternate flow.</li> </ol>	D. Beebe
8/20/2001	2.1	Changed name of use case from Renter's Vehicle/Shop to Vehicle/Shop.	D. Beebe
8/28/2001	2.2	<ol style="list-style-type: none"> <li>1. Added "Zero Days" to list of Theft Waiver Days</li> <li>2. Added note that "Theft Waiver Days" field is not displayed in Europe.</li> <li>3. Added note that the vehicle "Year" is not displayed in UK.</li> </ol>	D. Beebe

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9/4/01	2.3	<ol style="list-style-type: none"> <li>Added two European requirements for system generated notes.</li> <li>Vehicle Year field is not present in UK or Ireland.</li> <li>License plate field is removed.</li> <li>Registration number field added for Europe.</li> <li>Zero theft waiver days removed.</li> <li>Date of Loss not required.</li> </ol>	D. Beebe
9/6/01	2.4	<ol style="list-style-type: none"> <li>Added the values that are in the drop down for the class field in Germany.</li> </ol>	D. Beebe
9/7/01	2.5	<p>Changed wording from Account Search to Search.</p> <p>Changed wording from Telephone Number to Phone Number.</p>	L. Moellman
9/19/2001	2.6	Separated the three system generated notes for when the user changes the renter's vehicle Year, Make and/or Model.	D. Beebe
9/25/01	2.7	Added spec noting what information should display in the Navigation Bar for Vehicle/Shop	D. Beebe
10/23/2001	2.8	<ol style="list-style-type: none"> <li>Removed system note "Not on File Account XXXX has been added as a Shop".</li> <li>Changed system note "Not on file contact XXXX was added for Shop Account XXXX" to "Not on file contact XXXX was added for Account XXXX"</li> </ol>	D. Beebe
10/29/2001	2.9	<ol style="list-style-type: none"> <li>Corrected "driveable" to "drivable".</li> <li>Added requirements indicating what happens to fields when a reservation is edited.</li> </ol>	D. Beebe
11/13/2001	3.0	<ol style="list-style-type: none"> <li>Changed theft waiver days from "One Day", "Two Days", "Three Days" to "1 Day", "2 Days" and "3 Days".</li> <li>Added system generated notes for Other Make and Other Model</li> </ol>	D. Beebe



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11/20/2001	3.1	Removed requirement to have previously selected Bill-To and/or Referral appear at the top of the Branch Short List.	D. Beebe
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11/20/2001 3.1 Removed requirement to have previously selected Bill-To and/or Referral appear at the top of the Branch Short List. D. Beebe

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# Use Case Specification: Vehicle/Shop

## 1. Vehicle/Shop Use Case

### 1.1 Brief Description

This use case describes the how the user interacts with a system to indicate the renter's type of vehicle that is being repaired, notes about the vehicle, whether the vehicle is drivable, the type of loss, the date of loss and the theft waiver days. This use case also describes how the user interacts with a system to indicate which shop a renter's vehicle is being repaired at.

## 2. Flow of Events

### 2.1 Basic Flow

#### 2.1.1 *Select Vehicle/Shop*

The Vehicle/Shop Use Case begins when the user navigates to the Vehicle/Shop area of a reservation or ticket. This could be initiated at any point during the Reservation/Open Ticket process.

#### 2.1.2 *System displays the Select Vehicle, Loss Information and Select Shop Areas*

The system displays an area for the user to select and enter information about the renters vehicle. The fields displayed to the user are the following:

- Year (If the physical terminal location is in the U.K. and Ireland the system does not display this field.)
- Make
- Other Make
- Model
- Other Model
- Color
- Other Color
- Registration Number (If the physical terminal location is in Europe the system displays this field.)

If the physical terminal location is in Germany the system also displays the following field to the user:

- Class
  - o (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

(The Legacy/ECARS 1.0 system does not store the registration number or the "Schwackeliste" Class in Germany.)

If the physical terminal location is in Germany also displays the following fields to the user:

- Vehicle Type
- Number of Doors
- Fuel Type
- Engine Size
- Engine Power
- Class

The system also displays an area for the user to enter and select loss information about the

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vehicle. The fields displayed to the user are the following:

- Is Car Drivable?:
  - (Blank)
  - Yes
  - No
- Type of Loss:
  - (Blank)
  - Damage
  - Theft
- Total Loss
  - (Blank)
  - Yes
  - No
- Date of Loss
- Theft Waiver Days (If the physical terminal location is in Europe the system does not display this field.)
  - (Blank)
  - 1 Day
  - 2 Days
  - 3 Days

The system also displays an area for the user to enter Notes about the Vehicle.  
The default values for the above fields is (Blank)

The system displays an area for the user to select an account from the Branch Short List. The system also gives the user the option to:

- Enter a Legacy Customer Number. If the user chooses this option, the use case continues alternate flow Enter a Legacy Customer Number.
- Search for an Account. If the user selects this option, the use case continues at alternate flow Search.
- Add a "Note on File" Shop to the reservation/open ticket. If the user selects this option, the use case continues at alternate flow Add Not on File Account.

### 2.1.3 *User Decides to Search for Year*

The user initiates a search for the year a renter's vehicle was manufactured.

### 2.1.4 *System Searches for Vehicle Year*

The system retrieves and displays the list of years that a user may select from. \_

### 2.1.5 *User Selects the Vehicle Year*

The user selects the year of the renter's vehicle.

### 2.1.6 *System Searches for Make*

The system retrieves and displays the list of possible makes to choose from for the previously selected (vehicle) year.

### 2.1.7 *User Selects the Make*

The user selects the make of the renter's vehicle. The user can also choose to select "Other" and/or enter text in the "Other Make" field.

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#### 2.1.8 System Searches for Model

The system retrieves and displays the list of possible models to choose from for the previously selected make.

#### 2.1.9 User Selects the Model

The user selects the model of the renter's vehicle. The user can also choose to select "Other" and enter text in the "Other Model" field. If the physical terminal location is in Germany, the use case continues at Alternate Flow German Vehicle and Class Information.

#### 2.1.10 System displays Colors

The system retrieves and displays the list of colors to choose from.

#### 2.1.11 User Selects the Color

The user selects the color of the renter's vehicle. The user can also choose to select "Other" and enter text in the "Other Color" field.

#### 2.1.12 User Enters the Vehicle Note

The user enters a note about the renter's vehicle.

#### 2.1.13 User Selects and Enters the Loss Information

The user selects whether the car is drivable, the type(s) of loss and the date of loss. If the user selects "Theft" as a type of loss the use case continues at alternate flow Theft Waiver Days. User Selects to display Branch Short List

he user selects the option to display the branch short list.

#### 2.1.14 System displays Branch Short List

The system retrieves and displays the Branch Short list. The columns that are displayed to the user are (from left to right).

- Account name
- Legacy Customer Number (called Account Number in ECARS 2.0)
- Account type
- Owning Group and Branch
- Address
- City
- State
- Zip
- Phone Number(s)

If the physical terminal location is in Europe, the use case continues at Alternate Flow European Branch Short List.

#### 2.1.15 User selects Account from Branch Short List

The user selects an account from the list. If the user does not choose an account from the list, the use case continues at alternate flow Search.

#### 2.1.16 System Displays Contacts

The system displays the list of Contacts for the selected Account to the user along with "Unknown". (All Accounts have a listing of "Unknown" as a Contact.)

The column displayed to the user will be the following:

- Last Name

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- First Name

If there are no Contacts identified for a particular Account besides "Unknown", the use case continues at alternate flow No Contacts.

#### 2.1.17 Option to Select Contact or Add New Contact

The user has the option to select a contact from the list or add a New Contact.

#### 2.1.18 User Selects Contact

The user selects a contact from the list. If the user chooses to add a new contact, the use case continues at alternate flow Add New Contact.

#### 2.1.19 User Selects to Exit the Vehicle/Shop Area

The user selects to exit the Vehicle Area/Shop. (From here, the user can navigate to any other area within the Reservation/Open Ticket.)

#### 2.1.20 Validation of the Date of Loss and Theft Waiver Days

The system validates the value in the date of loss field. If a date of loss is not valid because:

- The date does not exist (February 30)
- The date is greater than today's date.

the use case continues at alternate flow Invalid Date Value.

#### 2.1.21 End

The use case ends.

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## 2.2 Alternative Flows

### 2.2.1 German Vehicle and Class Information

- 2.2.1.1 The system retrieves and displays the list of Vehicle Types that a user may select from for the previously selected model.
- 2.2.1.2 The user selects the Type of the renter's Vehicle.
- 2.2.1.3 The system retrieves and displays the list of Number of Doors that a user may select from for the previously selected Vehicle Type.
- 2.2.1.4 The user selects the Number of Doors for the renter's vehicle.
- 2.2.1.5 The system retrieves and displays the list of Fuels that a user may select from for the previously selected Number of Doors for the renter's vehicle.
- 2.2.1.6 The user selects the Fuel type for the renter's vehicle.
- 2.2.1.7 The system retrieves and displays the list of Engine Sizes that a user may select from for the previously selected Fuel type for the renter's vehicle.
- 2.2.1.8 The user selects the Engine Size for the renter's vehicle.
- 2.2.1.9 The system retrieves and displays the list of Engine Powers that a user may select from for the previously selected Engine Size for the renter's vehicle.
- 2.2.1.10 The user selects the Engine Power for the renter's vehicle.
- 2.2.1.11 The system retrieves and displays the Class for the renter's vehicle.
- 2.2.1.12 The use case continues at System displays Colors in the basic flow.

### 2.2.2 Theft Waiver Days

- 2.2.2.1 When the user selects "Theft" as a type of loss, the system enables the "Theft Waiver Days" field.
- 2.2.2.2 The user selects the number of theft waiver days.
- 2.2.2.3 The use case returns to User Selects to Exit the Vehicle/Shop Area in the basic flow.

### 2.2.3 Invalid Date Value

- 2.2.3.1 The system displays a feedback message that the "Date is invalid".
- 2.2.3.2 The system prompts the user to correct the date.
- 2.2.3.3 The user selects to correct the date and the use case returns to User Selects and Enters the Loss Information in the basic flow.

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## 2.2.4 European Branch Short List

2.2.4.1 The system retrieves and displays the European Branch short list. (NOTE: This list is comprised of all accounts that have an owning Group that equals the Group of the physical terminal location.) The columns displayed to the user are :

- Account Name
- Account Number
- Account Type
- Owning Group/Branch
- Address
- City
- State
- Zip
- Phone Numbers.

2.2.4.2 The user selects an account from the list that is displayed.

2.2.4.3 The use case continues at User selects Account from Branch Short List in the basic flow.

## 2.2.5 Search

2.2.5.1 The system displays an area with all the fields emptied out so that the user can enter search criteria. The fields that are available are:

- Group. This includes an "All Groups" option. For reservation pilot, group will be limited to the physical location's group only.
- Account Name
- Account Phone Number(s)
- Account Type. This includes an "All" option. (See Special Requirements for the list of valid Account Types)

2.2.5.2 The user enters an Account Name and selects "All" as the Account Type.

2.2.5.3 The user initiates the search.

2.2.5.4 The system validates the search criteria. (If only an account type is entered, the system will prompt the user that at least one other criterion must be selected. If only a group is chosen, the system will prompt the user that at least one other criterion must be selected.)

2.2.5.5 The system checks the status of the search. If No Account Matches are found, the use case continues at alternate flow No Account Matches.

2.2.5.6 The system displays the matches to the user in a summary list. The columns that are displayed to the user are: (from left to right)

- Account name
- Legacy Customer Number (called Account Number in ECARS 2.0)
- Account type
- Owning Group and Branch
- Address
- City
- State
- Zip
- Phone Number(s)



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2.2.5.7 The user has the following options:

- Select an account from the summary list.
- Clear the search criteria.
- Search again.
- Exit.

2.2.5.8 If the user chooses to select an account from the summary list, the use case continues at System Displays Contacts in the basic flow. If the user chooses to clear the search criteria, the use case continues at the first step in alternate flow Search. If the user chooses to search again, the use case continues at the first step in alternate flow Search. If the user chooses to exit, the use case continues at System displays Branch Short List in the basic flow.

## **2.2.6 Enter a Legacy Customer Number**

2.2.6.1 From the Basic Flow, the user chooses to enter a Legacy Customer Number.

2.2.6.2 The user types in a Legacy Customer Number and initiates a search for all the information associated with the entered Legacy Customer Number.

2.2.6.3 The system checks the status of the search. If No Account Matches are found, the use case continues at alternate flow No Account Matches. If More than one Account match is found, the use case continues at alternate flow More Than One Account Match. If the search results in only one match, the use case continues at System Displays Contacts in the basic flow.

## **2.2.7 No Account Matches**

2.2.7.1 From the basic flow, the system displays a message to the user letting them know that No Account Matches or records were found.

2.2.7.2 The use case continues at System displays the Select Vehicle, Loss Information and Select Shop Areas in the Basic Flow.

## **2.2.8 More Than One Account Match**

2.2.8.1 The system displays a summary list of the matches to the user. The columns that will be displayed in the summary list are (from left to right):

- Account name
- Legacy Customer Number
- Account type
- Address
- City
- State
- Zip
- Phone Number(s)

2.2.8.2 The user has the option to select an account from the list or to exit. If the user selects an Account from the list, the use case continues at System Displays Contacts in the basic flow. If the user chooses to exit the list without selecting an Account, the use case continues at System displays Branch Short List in the basic flow.

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## **2.2.9 Add Not on File Account**

2.2.9.1 The system displays an area for the user to enter Account information for an account that is not on file. The fields that must be entered are:

- (Account) Name
- (Street) Address
- Zip
- Phone Number
- City
- State
- Zip
- Contact Last Name
- Contact First Name

2.2.9.2 The user enters the (Account) Name, (Street) Address, Zip/Postal Code and Phone Number.

2.2.9.3 The system displays the option to search for the City and State/Province based upon the Zip/Postal Code and Country.

2.2.9.4 The user selects the option and the system performs the search for the City and State/Province that match the Zip/Postal Code and Country.

2.2.9.5 The system produces a single City and State/Province result and continues at the next step in the basic flow. If the search produces no matching City and State/Province information, the use case continues at alternate flow No Match to Zip/Postal Code. If the search produces multiple cities the use case continues at alternate flow Multiple City Results.

2.2.9.6 The system populates the City and State/Province fields. The system also makes the information in these fields available for edit.

2.2.9.7 The system associates the Not on File account to the reservation/ticket and the use case continues at alternate flow Add New Contact. If the user chooses to exit, the use case continues at System Displays Contacts in the basic flow.

2.2.9.8 The system associates the new contact added to the Account chosen and the use case continues at User Selects to Exit the Vehicle/Shop Area in the basic flow.

## **2.2.10 No Match to Zip/Postal Code**

2.2.10.1 The system displays a feedback message that the zip/postal code does not produce matching city and state/province information.

2.2.10.2 The system prompts the user to manually enter city and state/province information.

2.2.10.3 The user selects to manually enter city and state/province information and the use case proceeds back to 2.2.9.7 in the alternate flow Add Not on File Account.

## **2.2.11 Multiple City Results**

2.2.11.1 The system displays a feedback message that the Zip/Postal code produces more than one matching city.

2.2.11.2 The system displays the list of cities and prompts the user to select a City.

2.2.11.3 The user selects a City from the list and the use case proceeds back to 2.2.9.7 in the alternate

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flow Add Not on File Account.

## **2.2.12 No Contacts**

2.2.12.1 From the basic flow, the system displays a message letting the user know that no contacts have been set up for this Account. (All Accounts have a listing of "Unknown" as a contact. The message will display when "Unknown" is the only contact present.)

2.2.12.2 The user can either:

- Add a new contact.
- Select a contact of "Unknown"
- 

2.2.12.3 If the user chooses to add a new contact, the use case continues at alternate flow Add New Contact. If the user selects a contact of "Unknown", the use case continues at User Selects to Exit the Vehicle/Shop Area in the Basic Flow.

## **2.2.13 Add New Contact**

2.2.13.1 From the basic flow, the system displays an area for the user to enter Contact information. The fields that must be entered are:

- Last Name
- And/or
- First Name

2.2.13.2 The user enters a first and/or last name and accepts the new contact information entered. If the user chooses to exit, the use case continues at System Displays Contacts in the basic flow.

2.2.13.3 The system associates the new contact added to the Account chosen and the use case continues at User Selects to Exit the Renter's Vehicle/Shop Area in the basic flow.

## **3. Special Requirements –Vehicle/Shop Use Case**

- 1) Year, Make and Model domain values come from the database.
- 2) The list of years that the renter's vehicle was manufactured will be listed in descending order.
- 3) The note entered into the Vehicle Notes field should be viewable from the Vehicle Notes section of the Vehicle/Shop screen. They WILL NOT be viewable from the Notes screen/use case.
- 4) A contact must be selected for every Account that is select as a Shop. NOTE: This is a not a requirement for a reservation only open ticket.
- 5) The valid Account Types that are displayed to the user in Search are:
  - o Body Shop
  - o Corporate
  - o Government
  - o Fleet
  - o Dealership
  - o Insurance
  - o Other
- 6) The Branch Short List is currently being generated from the existing Legacy system and is being stored in a table on the Oracle database.
- 7) The system should not search or display for any deactivated or deleted accounts.

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- 8) The user must have the ability to cancel a search at any time during the search.
- 9) The Navigation Bar for the Vehicle/Shop area should display the following:
  - a. Line 1: Year, Make and Model of the Renter's Vehicle
  - b. Line 2: Shop Account Name
- 10) Notes should be generated when any of the following events occur:

<u>The user adds a "Not on File" contact.</u>	Not on file contact "First Name Last Name" was added for Account "XXXXX"	Create/Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
<u>The user changes the shop account.</u>	Shop "XXXX" was changed to "XXXX".	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
<u>The user changes the type of loss.</u>	Type of loss "XXXX" was changed to "XXXX".	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
<u>The user changes the "Total Loss?"</u>	Total Loss "XXXX" was changed to "XXXX".	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
<u>The user changes the date of loss.</u>	Date of loss "XXXXXX" was changed to "XXXXXX".	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
<u>The user changes number of theft waiver days.</u>	Theft waiver days "X" was changed to "X"	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
<u>The user changes the renter's vehicle Year.</u>	The renter's vehicle Year "XXXX" was changed to Year "XXXX".	Edit	Edit	Vehicle/Shop
<u>The user changes the renter's vehicle Make.</u>	The renter's vehicle Make "XXXX" was changed to Make "XXXX"	Edit	Edit	Vehicle/Shop
<u>The user changes the renter's vehicle Model.</u>	The renter's vehicle Model "XXXX" was changed to Model "XXXX"	Edit	Edit	Vehicle/Shop
<u>The user changes the renter's vehicle Other Make text.</u>	The renter's vehicle other Make "XXXX" was changed to "XXXX"	Edit	Edit	Vehicle/Shop
<u>The user changes the renter's vehicle Other Model text.</u>	The renter's vehicle other Model "XXXX" was changed to "XXXX"	Edit	Edit	Vehicle/Shop
<u>The user changes the registration number of the renter's vehicle. (If the physical terminal location is in Europe.</u>	The renter's vehicle registration number was "XXXX" was changed to "XXXX".	Edit	Edit	Vehicle/Shop
<u>The user changes the class of the renter's vehicle. (If the physical terminal location is in Europe.)</u>	The renter's vehicle class "X" was changed to "X".	Edit	Edit	Vehicle/Shop

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#### Edit Reservation

##### Shop Area Fields

##### Account Name

If the account name is changed (to a valid account), account number will change appropriately and the contact name will now be "select".

##### Account Number

If the account number is changed, the account name will change appropriately and the contact name will now be "select".

##### Contact Name

There are no edit rules for open ticket on changing or deleting a contact name.

##### Phone Number

There are no edit rules for open ticket on changing or deleting a phone number.

##### Vehicle Area Fields

##### Year

There are no edit rules for open ticket on changing or deleting a Year.

##### Make

If a Make is changed or deleted, the Model field will be cleared.

##### Model

There are no edit rules for open ticket on changing or deleting a Model.

##### Other Make, Other Model, Other Color

There are no edit rules for open ticket on changing or deleting an Other Make, Other Model, Other Color.

##### Loss Information Area Fields

##### Is Car Drivable?, Type of Loss, Total Loss?, Date of Loss, and Theft Waiver Days

There are no edit rules for open ticket on changing or deleting Is Car Drivable?, Type of Loss, Total Loss?, Date of Loss, and Theft Waiver Days.

#### **4. Pre-Conditions**

- A user is authorized through a login process to create or edit a reservation or ticket.
- The user has accessed a reservation or ticket, either in the process of editing or creating.

#### **5. Post-Conditions**

#### **6. Questions**

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# **ECARS 2.0 Reservation Use Case Specification: Reservation with Dates**

**Version 1.2  
Draft**

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## Revision History

Date	Version	Description	Author
06/11/2001	1.0	Initial Draft	J. Gaines
6/25/01	1.1	Updates to Use Case	M. Pallia
6/27/01	1.2	<p>The changes made are:</p> <ul style="list-style-type: none"> <li>• The dependencies between options were removed.</li> <li>• Pick-up location is a free form text area</li> <li>• Start charges by typing in a day was changed to 1 character entry only</li> <li>• Airport Information Scoped for pilot</li> <li>• System Generated directions scoped for pilot</li> <li>• For pick-up time, the user must be able to also see how many reservations are booked during each half hour for the selected pick-up date.</li> <li>• Mileage is coined –no charge for mileage or limited free mileage.</li> <li>• Start charges if different now includes a date and TIME. Not just a date.</li> </ul>	M. Pallia
10/12/2001	1.3	Removed all references to start/end charges date	James Atteberry

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# Use Case Specification: Reservation with Dates

## 1. Reservation with Dates

### 1.1 Brief Description

This use case describes the interactions a user makes with the system to determine what day and time, where, and how a customer will be come into Enterprise.

## 2. Flow of Events

### 2.1 Basic Flow

#### 2.1.1 The system displays an area with the following options :

Sorted from most commonly entered options to least commonly entered.

- Enter a Pick Up Date and Time . If the user chooses this option, the use case continues in the basic flow
- Select a Pick up Method . If a pick up method is selected, the use case continues at alternative flow (Pick Up Method)
- Pick-up location . If the user chooses to identify a pick-up location, the use case continues at alternate (Pick-up Location).
- Take Directions . If take directions is selected, the use case continues at alternate (Directions).
- Change P/U or Return Location . If the user elects to change pick up or return location, the use case initiates the Change P/U or Return Location use case.
- Enter Package Specials . The use case continues at alternative flow (Package Specials).
- Airport Information . If the user chooses this option, the use case continues at alternate (Airport Info).
- Enter a Return Date and Time . If a Return date is entered, the use case continues at alternative flow (Add Return Date and Time)
- Enter a Drop Charge . If a Drop Charge is entered, the use case continues at alternate (Add a Drop Fee)

#### 2.1.2 The system provides the following options to the user for selecting pick up date and time :

- Manually entering the date and time .
- Using a calendar function to select a date . The use case continues at alternative flow (calendar function)
- Selecting a time from a list of 30-minute time increments . The use case continues at alternative flow (Pick-up time - 30-minute increments)

2.1.3 The system checks the date entered . If the date entered is less than the current date or more than 13 months in the future , the use case continues at alternative flow (Invalid Pick Up Date). If the date entered is not a valid date (i.e. February 30) the use case continues at alternative flow (Invalid Date). If the Pick Up date is a day that the branch is closed , the use case continues at alternative flow (Branch Hours). If the Pick-up date is prior to the current date , the use case continues at alternate (Invalid Date).

2.1.4 The system checks the time entered . If the time is invalid , the use case continues at alternative flow (Invalid Time). If the time is outside of the branch's operating hours , the use case continues at alternative flow (Branch Hours). NOTE- the user will not be allowed to enter a time until a date has been entered.

#### 2.1.5 The user has the following options

- Choose another option from 2.1.1 of the basic flow.

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- Complete Reservation
- Save and Continue . If the user chooses to Save and Continue, the use case continues at alternative flow (Save and Continue)
- Navigate to any other area within reservation . The system initiates the Reservation Navigation Use Case.

(Note: User has the option to save to the database and continue from place saved anytime after (2.1.2) of the basic flow.)

2.1.6 The use case ends.

## **2.2 Alternative Flows**

### **2.2.1 Invalid Pick Up Date**

2.2.1.1 The system displays a feedback message that the Date is invalid .

2.2.1.2 The system prompts the user to correct the values that are invalid .

2.2.1.3 The user enters the correct values and the use case continues at (2.1.3) of the basic flow.

### **2.2.2 Invalid Return Date**

2.2.2.1 The system displays a feedback message that the Date is invalid .

2.2.2.2 The system prompts the user to correct the values that are invalid .

2.2.2.3 The user enters the correct values and the use case continues at (2.2.7) of the alternate flow (Return Date and Time).

### **2.2.3 Invalid Date**

2.2.3.1 The system displays a feedback message that the Date is invalid .

2.2.3.2 The system prompts the user to correct the values that are invalid .

2.2.3.3 The user enters the correct values and the use case continues at (2.1.3) of the basic flow.

### **2.2.4 Invalid Time**

2.2.4.1 The system displays a feedback message that the Time is invalid .

2.2.4.2 The system prompts the user to correct the values that are invalid .

### **2.2.5 Branch Hours**

2.2.5.1 The system displays a feedback message that the branch is closed.

2.2.5.2 The user is given the option to select a different time or the user can continue.

2.2.5.3 If the user chooses to continue, the system will accept the values and the use case continues at (2.1.1) of the basic flow. If the user chooses to select another time, the use case will continue at (2.1.4) of the basic flow.

### **2.2.6 Add Return Date and Time**

2.2.6.1 From the basic flow, the user decided to enter a Return Date and time .

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2.2.6.2 The system provides the following options to the user for selecting return date and time:

- Manually entering the date and time.
- Using a calendar function to select a date. The use case continues at alternative flow (calendar function)
- Selecting a time from a list of 15-minute time increments. The use case continues at alternative flow (15-minute increments)

2.2.6.3 The system checks date entered. If the date entered is less than the current date or more than 13 months in the future, the use case continues at alternative flow (Invalid Return Date). If the date entered is not a valid date (i.e. February 30) the use case continues at alternative flow (Invalid Date). If the Pick Up date is a day that the branch is closed, the use case continues at alternative flow (Branch Hours).

2.2.6.4 The system checks the time entered. If the time is invalid, the use case continues at alternative flow (Invalid Time). If the time is outside of the branch's operating hours, the use case continues at alternative flow (Branch Hours). If a time is entered but no date is entered, the use case continues at alternative flow (Time with No Date)

2.2.6.5 The use case continues at (2.1.5) within the basic flow

## **2.2.7 Calendar Function**

2.2.7.1 From the basic flow or Return Date alternate, the system will display a calendar control to the user according the HTML standard already implemented.

2.2.7.2 The user selects the date

2.2.7.3 The system populates the date and the use case continues at the exact spot from which they came.

## **2.2.8 Pick-up Time - 30-Minute Increments**

2.2.8.1 From the basic flow, the user chooses to select a 30-minute interval from a list.

2.2.8.2 The system displays a table to the user that has the following information:

- A list of times in 30-minutes intervals for one 24-hour period cued up to the first half hour interval of the physical location's operating hours for the chosen pick-up date. For example, if the branch opens at 7:30 am on the date that is selected, the list should cue up to the 7:30 interval. On the other hand, if the branch opens at 7:15am, the list should cue up to 7:00 am. (NOTE: The user must be able to select any 30-minute interval within one 24-hour period).

And

- The total number of reservations for each 30-minute interval during the date selected as the pick-up date. The reservation count does not include voided reservations.

(NOTE: the system must differentiate the time intervals that are not within the operating business hours of the terminal's physical location)

2.2.8.3 The user selects a 30-minute interval from the list. If the date the user selects is a day the branch is closed or if the branch has no hours of operation defined, the system will cue up to 7:00am. If the interval is outside of the branch's operating hours, the use case continues at alternate (Branch Hours). If the Pick-up date and Return date are the same and the return time is prior to the pick-up time, the use case continues at alternate (Invalid time)

2.2.8.4 The use case continues at (2.1.5) within the basic flow.

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## 2.2.9 15-Minute Increments

2.2.9.1 From the Alternate (Return Date and Time) and alternate (Package Specials), the user chooses to select a 15-minute interval from a list.

2.2.9.2 A list of times in 15-minutes intervals for one 24-hour period cued up to the first half hour interval of the physical location's operating hours for the chosen pick-up date. For example, if the branch opens at 7:30 am on the date that is selected, the list should cue up to the 7:30 interval. On the other hand, if the branch opens at 7:15am, the list should cue up to 7:00 am. If the branch is closed or there are no hours listed for a particular location, the list should cue up to 7:00am (NOTE: The user must be able to select any 15-minute interval within one 24-hour period).

(NOTE: the system must differentiate the time intervals that are not within the operating business hours of the terminal's physical location)

2.2.9.3 The user selects a 15-minute interval from the list. If the interval is outside of the branch's operating hours, the use case continues at alternate (Branch Hours). If the Pick-up date and Return date are the same and the return time is prior to the pick-up time, the use case continues at alternate (Invalid time)

2.2.9.4 The use case continues at (2.1.5) within the basic flow.

## 2.3 Drop Fee

2.3.1 The user selects to add a drop fee for the return location of a reservation.

2.3.2 The system will allow the user to enter a drop fee.

2.3.3 The user enters the drop fee and the use case continues at ( ) in the basic flow.

## 2.3.4 Package Specials

2.3.4.1 From the basic flow, the user chooses to add a special rate package.

(NOTE - If the user wants to add a Package special, the user must first select a billing type)

2.3.4.2 The system displays an area for the user to enter the following:

- Start date
- Start time
- End date
- End time
- Package Amount or Per Day amount
- Free Miles or Miles per day
- Additional Mileage Fee

2.3.4.3 The user enters a start date, start time, end date and end time manually in to the area provided. If the user chooses the calendar function to enter a date, the use case continues at alternate (calendar function). If the user selects a time from the 30-minute intervals provided, the use case continues at alternate (30 minute increments)

2.3.4.4 The system checks the dates and times entered by the user. If any of the following occur, the use case continues at either alternate (invalid date), alternate (invalid time) or alternate (Time no Date):

- A time and no date is chosen
- A start date prior to the current day

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- A start date prior to the Pick-up date
- An end date after the return date
- An end date prior to the pick-up or start date
- If the start date and the end date are the same date.

If the user picks a date or time outside of the branch's operating hours, the use case continues at alternate (Branch Hours)

2.3.4.5 The system provides the user with the following option:

- Enter a package amount or a per day amount

2.3.4.6 The User enters an amount for the package in the area provided. If the user chooses to enter a per day amount, the use case continues at alternate (Per Day Special)

2.3.4.7 The system provides an area to determine the amount of miles allowed for the package and gives the user the option to choose No Charge for Miles or specify a limited amount of free miles.

2.3.4.8 The user selects No Charge for Miles. If the users chooses to specify limited free mileage, the use case continues at alternate (Limited Mileage Package)

2.3.4.9 The use case continues at (2.1.5) within the main flow.

### **2.3.5 Per Day Special**

2.3.5.1 From the alternate (Package Special), the system displays an area for the user to enter a per day rate and chose either No Charge for Miles or limited free miles.

2.3.5.2 The user types in a per day rate and chooses No Charge for Miles for the mileage. If the user chooses limited free miles, the use case continues at alternate (limited mileage per day special).

2.3.5.3 The system validates the rate and the mileage choice. The system retains the entered information and the use case continues at (2.1.5) within the basic flow.

### **2.3.6 Limited Mileage Package**

2.3.6.1 From the alternate Package Specials, the system provides an area for the user to enter the following information:

- Mileage per package
- Amount for over mileage

2.3.6.2 The system validates the mileage entered and the dollar amount entered. The system retains the data entered and the use case continues at (2.15) within the basic flow.

### **2.3.7 Limited Mileage Per Day Special**

2.3.7.1 From the alternate (Per Day Special), the system provides an area for the user to enter the following information:

- Mileage per day during the special
- Amount for over mileage

2.3.7.2 The system validates the mileage entered and the dollar amount entered. The system retains the data entered and the use case continues at (2.15) within the basic flow.

### **2.3.8 Pick Up Method**

2.3.8.1 From the basic flow, the system displays an area for the user to select a pick-up method. The values available to the user are:

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- W/In
- P/Up
- Del
- CWC
- Del/R

2.3.8.2 The user selects walk-in as the pick-up method. If the user selects P/Up, Del, CWC or Del/R, the use case continues at alternate (Pick-up Location), otherwise, the use case continues at (2.1.5) within the basic flow.

### **2.3.9 Pick Up Location**

2.3.9.1 From the alternate (Pick-up Method), the system provides an area for the user to manually enter a pick-up location in a free form text field.

2.3.9.2 The user enters a location

2.3.9.3 The system retains the information that was entered and provides the user the following options:

- Enter Directions – If the user chooses this option, the use case continues at alternate (Directions).
- Select another option. The use case continues at (2.1.5) within the basic flow.

### **2.3.10 Airport Information**

2.3.10.1 From the basic flow, the system displays the following fields to be entered by the user when the Pick up location selected is Airport:

- Airline Name
- Flight Number
- Arrival Time

2.3.10.2 The user enters the information and the use case continues at (2.1.5) of the basic flow.

### **2.3.11 Directions**

2.3.11.1 From alternative flow (Pick up location) or the basic flow, the system will provide an area to either enter directions or, if a pick-up location has been chosen, the system will determine the directions. If the user chooses system-generated directions, the use case continues at alternate (system-generated directions).

2.3.11.2 The user types in the directions in a free text area.

2.3.11.3 The system retains the directions.

2.3.11.4 The use case continues at (2.1.5) within the basic flow.

### **2.3.12 System generated directions (Future scope)**

2.3.12.1 The system checks the pick up location and determines if there is enough information to generate directions.

2.3.12.2 The system generates the driving directions from the physical terminal's location to the pick-up location selected by the user.

2.3.12.3 The system displays the directions to the user and the use case continues at (2.1.5) within the basic flow.

### **2.3.13 Cancel**

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2.3.13.1 Get from HTML standards document\*\*\*\*\*

### 2.3.14 Complete Reservation

2.3.14.1 Get from HTML standards document\*\*\*\*\*

### 2.3.15 Save and Continue

2.3.15.1 Get from HTML standards document\*\*\*\*\*

## 3. Special Requirements – Reservation Dates

- The user may key in a pick up time or select a pick up time from a list of time periods in 30-minute intervals, within branch operating hours. A time may not be selected without a valid date.
- User must be able to navigate to any other panels within the application.
- The user may only determine one discount per reservation

## 4. Pre-Conditions

- The system must have successfully initiated the Create Reservation Use Case.

## 5. Post-Conditions

## 6. System Generated Notes – Dates

6.1 Notes should be generated when the following events take place :

Event	Note Text	When to generate
<u>The Reservation Pick-up date is changed</u>	Pick-up Date “XX/XX/XXXX” was changed to “XX/XX/XXXX”	Edit
<u>The Reservation Pick-up time is changed</u>	Pick-up Time “XX: XX” was changed to “XX: XX”	Edit
<u>The Reservation pick-up method is changed</u>	Pick-up Method “XX” was changed to “XX”.	Edit
<u>The Reservation pick-up location is changed</u>	Pick-up Location “XXXX” was changed to “XXXXX”	Edit
<u>The Reservation Return date is changed</u>	Return Date “XX/XX/XXXX” was changed to “XX/XX/XXXX”	Edit
<u>The Reservation Return time is changed</u>	Return Time “XX: XX” was changed to “XX: XX”	Edit
<u>The Reservation return method is changed</u>	Return Method “XX” was changed to “XX”.	Edit

## 7. Extension Points

## 8. Future Scope

## 9. Q's

1. When coming in from create reservation, if no pick up date has been entered and no date is entered in the dates section, will the system default to the current date or leave the pick up date blank?
2. Does the user have to select a method, location and directions or can the user enter any of the following independently?

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# **ECARS 2.0 Reservation Use Case Specification: Discounts and Products Pilot**

**Version 1.3  
Draft**



<Project Name>	Version: <1.0>
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## Revision History

Date	Version	Description	Author
6/15/01	1.0	First Draft	M. Pallia
6/21/01	1.1	Added SLP to products, added account as a discount type, and changed "entire rental" to "all days".	M. Pallia
6/25/01	1.2	Changed entire use case to reflect only the current functionality of ECARS 1.0	M. Pallia
6/27/01	1.3	Added a flow for population of DW and PAI for a rate source.	M. Pallia

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# Use Case Specification: Discounts and Products Pilot

## 1. Discounts and Products Pilot

### 1.1 Brief Description

This use case describes the interactions between the user and the system when the user has decided to either manually select a discount, the user has selected a Rate Source that has a discount identified within the special instructions or the user wants to enter a rate for a product.

## 2. Flow of Events

### 2.1 Basic Flow

- 2.1.1 The use case begins when the user has either selected a rate source within the Rates Use case, has decided to manually add a discount to a reservation or enter a per day rate for CDW or PAI/PEC. If the user has selected a Rate Source, the use case continues at alternate (Rate Source Discount). If the user has decided to manually enter a discount, the use case continues in the basic flow. If the user has decided to enter a per day rate for CDW or PAI/PEC, the use case continues at alternate (Add Products).
- 2.1.2 The system displays an area for the user to enter a discount percentage amount .
- 2.1.3 The user enters a percentage discount. (Example, if a user enters an 8, it will be considered 8%)
- 2.1.4 The system checks the amount entered . If the amount entered exceeds 50, the system displays a message to the user that a discount cannot exceed 50% .
- 2.1.5 The system retains the amount entered
- 2.1.6 The user can navigate to any other part of the reservation and the system initiates the Reservation Navigation Use Case. (Note: the user should have the ability to navigate at any time within this flow)
- 2.1.7 The use case ends

### 2.2 Alternative Flows

#### 2.2.1 Rate Source

- 2.2.1.1 From the basic flow, the user has selected a rate source that has a discount, DW or PAI/PEC identified within the special instructions . If the rate source does not have a discount, DW or PAI/PEC identified, the use case continues at (2.1.1) within the basic flow. If the rate source does have DW, PAI/PEC or both identified, the use case continues at alternate (Rate Source Products).
- 2.2.1.2 The system populates the discount determined into the percentage discount area and gives the user the option to change or remove this discount . If the user chooses to change or remove the discount, the use case continues at (2.1.2) within the basic flow.
- 2.2.1.3 The user can navigate to any other part of the reservation and the system initiates the Reservation Navigation Use Case . (Note: the user should have the ability to navigate at any time within this flow)

#### 2.2.2 Rate Source Products

- 2.2.2.1 From the alternate (Rate Source), the system populates the amounts for DW, PAI/PEC or both

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determined by Special Instructions into the DW or PAI/PEC area and provide the user the option to change or remove the products . If the user chooses to change or remove the products, the use case continues at (2.2.3) within the basic flow.

2.2.2.2 The user can navigate to any other part of the reservation and the system initiates the Reservation Navigation Use Case . (Note: the user should have the ability to navigate at any time within this flow)

### 2.2.3 Add Products

2.2.3.1 From the basic flow, the user has decided to enter a rate for a product.

2.2.3.2 The system displays an area where the user can enter a per day rate for DW or PAI/PEC .

2.2.3.3 The user enters rates for DW or PAI/PEC . (Note: The user can enter either of these within a reservation).

2.2.3.4 From here, the user can navigate to any other part of the reservation and the system initiates the Reservation Navigation Use Case .

2.2.3.5 The use case ends

## 3. **Special Requirements**

- In Germany, it is against the law to show that a discount was applied to a rate and to print the discount.

## 4. **Future Scope**

## 5. **Pre-Conditions**

The user must have initiated the Create Reservation use case.

## 6. **System Generated Notes – Products and Discounts**

6.1 Notes should be generated when the following events occur :

Event	Note Text	When to generate
<u>The user changes any of the values within the products area .</u>	What values were changed and what the old and new values are.	Create (If the products are auto-populated) /Edit

## 7. **Post-Conditions**

## 8. **Extension Points**

## 9. **Questions**

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**<Enterprise Rent A Car>**

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**ECARS 2.0 Reservation  
Use Case Specification: Reservation Number Fast  
Path**

**Version <1.0>**

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## Revision History

Date	Version	Description	Author
<17/04/01>	<1.0>	<First draft of Fast Path>	<J. Gaines>
18/04/01	1.1	1 <sup>st</sup> revision per Tim Erickson's feedback on wording	J. Gaines

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# Use Case Specification: Reservation Number Fast Path

## 1. Reservation Number Fast Path

### 1.1 Brief Description

- 1.1.1 This use case describes how the user interacts with a system to search for and locate a reservation that is displayed in edit/view mode, using Fast Path. The use case shows the flow of events that occur when conducting a Fast Path Search. The system will search for, locate and display, in edit/view mode, a reservation based on an exact match of the reservation number entered by the user.

## 2. Flow of Events

### 2.1 Basic Flow

- 2.1.1 The use case begins when a user chooses to search for a reservation.
- 2.1.2 The user enters a reservation number in the Reservation Number field . The system searches for an exact match on the number entered .
- 2.1.3 The system initiates the Search Engine Use Case using the reservation number entered. The system searches for an exact match on the text starting from the first position in the field
- 2.1.4 The system receives the appropriate processing information from the Search Engine use case. If the search returned no records, the use case continues at alternate flow (No Matches). If the search returned more than one record, the use case continues at alternate flow (Multiple Matches). If the search has exceeded the time allotted, the use case continues at alternate flow (Time Out). Otherwise, the use case continues along the main flow.
- 2.1.5 The system initiates the Edit/View use case to displays the details of the reservation to the user.

Note: From within the Edit/View use case, the user can perform the following options :

- If the user chooses to print the reservation , the use case continues at alternate flow (Print the Reservation Details).
- If the user chooses to edit the reservation , the reservation continues at alternate flow (Edit a Reservation).

- 2.1.6 The use case ends.



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## 2.2 Alternative Flows

### 2.2.1 No Matches

2.2.1.1 From the basic flow (2.1.5), the system prompts the user that there were no records that matched the reservation number entered . Once the user acknowledges the prompt, the use case continues at (2.1.1) of the basic flow.

### 2.2.2 Multiple Matches

2.2.2.1 From the basic flow (2.1.4), the use case displays the results of the search according to the Default Sort Order (defined in the Search Reservation use case):

- Pick up Group (ascending). Concatenate pick up group and branch.
- Pick up Branch (ascending)
- Date (ascending)
- Time (ascending)
- Renter Name (ascending) (Last name, First name) This is format that renter name will display in the summary list
- Pick Up Method
- Car Class
- Reservation Type
- Reservation Number

2.2.2.2 Sort order for Date and Time Headers:

- Reservations with a date but no time.
- Reservations with a date and time.
- Reservations with no date but have a time.
- Reservations with no date and no time.

2.2.3 The user selects a single reservation to edit/view from the list of reservation matches displayed.

2.2.4 The system initiates the Edit/View use case to displays the details of the reservation to the user.

Note: From within the Edit/View use case, the user can perform the following options:

- If the user chooses to print the reservation, the use case continues at alternate flow (Print the Reservation Details).
- If the user chooses to edit the reservation, the reservation continues at alternate flow (Edit a Reservation).

### 2.2.5 Time Out.

2.2.5.1 The system displays a message to the user that the time allotted to search has been exceeded.

2.2.5.2 The system prompts the user to choose one of the following options:

- Quit the search and display none of the matches so far. Then the use case ends.
- Quit the search and display the matches found so far.
- Continue searching.

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2.2.5.3 If the user chooses to quit the search and not display the matches, the use case continues at (2.1.1) in the basic flow. If the user elects to quit the search and display the matches found, the use case continues at (2.1.4) of the Multiple Matches Alternative flow. If the user elects to continue the search, the use case continues at (2.1.3) of the basic flow.

### 3. Special Requirements

3.1 < First Special Requirement >

### 4. Pre-Conditions

4.1 The user has successfully logged onto the system.

### 5. Post-Conditions

### 6. Extension Points

### 7. FAQ

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## <Enterprise Rent A Car>

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# <ECARS 2.0 Reservation> Use Case Specification: Reservation Forecasting

Version 1.2

<ECARS 2.0 Reservation>	Version: <1.0>
Use Case Specification: <Reservation Forecasting>	Date: <05/01/2001>
<document identifier>	

## Revision History

Date	Version	Description	Author
4/18/01	1.0	Initial Draft of the Use Case	M. Pallia
4/19/01	1.1	Removed a FAQ, changed the word calendar to a better description, removed the special requirements	M. Pallia
4/23/01	1.2	Reworded part of the basic flow to better clarify the 14-day period and table to be displayed. Added the ability for the user to change the start date. Increased Change location to include Group/ Branch and Group/All branches	M. Pallia

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# Use Case Specification: Reservation Forecasting

## 1. Reservation Forecasting

### 1.1 Brief Description

This use case will describe the interactions between the system and a user when the user wants to view the total number of reservations per day over a two-week period.

## 2. Flow of Events

### 2.1 Basic Flow

2.1.1 The use case begins when the system determines the group and branch number using the terminal's physical location and the local date and time. If the user changes the location, the use case continues at alternate (Change location).

2.1.2 The system retrieves the total number of reservations for each day with in the 14-day period determined by the user, where the reservation pick-up date equals a day with in the 14-day period . If the user enters no date, the system will default the 14-day period to the current date and include the 13-days following the current date. (NOTE- the system will not retrieve any reservations that have a status of void)

#### 2.1.3 The system displays:

- The Month, Day and Year of the First Day with in the 14-day period.
- The Month, Day and Year of the Last Day with in the 14-day period.
- A table showing the total number of reservations for each day within the 14-day period.
- The Month, Day and Day of the week for each day within the Table.

#### 2.1.4 The user has the option to do one of the following:

- View the list of reservations for a specific day within the 14-day period.
- Move forward to the next 14-day period (if applicable)
- Move backward to the previous 14-day period (if applicable)
- Enter a different start date
- Refresh
- Exit

If the user chooses to view the list of reservations for a specific day within the 14-day period, the use case continues at alternate (Reservation List). If the user chooses to move forward to the next 14-day period, the use case continues at alternate (Next). If the user chooses to move to the previous 14-day period, the use case continues at alternate (Previous). If the user enters a different start date, the use case continues at alternate (Different Date). If the user chooses to Exit, the use case continues at (2.1.5) in the basic flow.

#### 2.1.5 The use case ends

### 2.2 Alternative Flows

#### 2.2.1 Next

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2.2.1.1 From the basic flow, the user will want to view the number of reservations per day for the next 14-day period.

2.2.1.2 The system determines the next 14-day period. (The Next 14 day period includes the LAST day of the current 14-day period and the 13 days in the future to that day.)

2.2.1.3 The use case continues at (2.1.2) in the basic flow.

## 2.2.2 Previous

2.2.2.1 From the basic flow, the user will want to view the number of reservations per day for the previous 14-day period.

2.2.2.2 The system determines the previous 14-day period. (A Previous 14 day period includes the FIRST day of the current 14-day period and the 13 days prior to that day.)

2.2.2.3 The use case continues at (2.1.2) in the basic flow

## 2.2.3 Change Location

2.2.3.1 From the basic flow, the user has the option to change the location: Here are the different combinations a user may select:

- Same Group (as the terminal's physical location) and a different Branch with in that group  
These will be available after the pilot of reservation
- Same Group (as the terminal's physical location) and all Branches with in that group.
- Different Group and a different Branch with in that Group
- Different Group and All branches within that Group

2.2.4 The user selects the branch drop down list.

2.2.5 The system will display the rental branches for the group, defaulting to the current location.

2.2.6 The user selects a branch from the drop down list.

2.2.7 The system will display a view of the selected branch's total number of reservations.

\*\*\*As soon as the limitations of the Peoplesoft Hierarchy are amended, the user should have the option to select any level within the Enterprise Branch Hierarchy and all the levels below the selected level. This hierarchy includes: Branch, Area, City, Region and Group.

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2.2.7.1 The System uses the new group and branch number selected as the location until the location is changed again. The use case continues at (2.1.2) in the basic flow.

## **2.2.8 Reservation List**

2.2.8.1 From the basic flow, the user wants to see a list of the reservations with a pick-up date that equals the day selected within the 14-day period.

2.2.8.2 The system initiates the Daily Activity Use Case.

## **2.2.9 Different Date**

2.2.9.1 From the basic flow, the user will want to view a 14-day period starting on a particular date. The user can enter this date manually or use a calendar control to select the date.

2.2.9.2 The system uses the date selected as the First day of the 14-day period. The use case continues at (2.1.2) in the basic flow.

## **2.2.10 Refresh**

2.2.10.1 From the basic flow, the user chooses to refresh.

2.2.10.2 The system uses the current date; the group and branch selected and determines the 14-day period . The use case continues at (2.1.2) in the basic flow.

## **3. Reservation Forecasting UC Special Requirements**

1. The user should be able to enter a date manually or select a date from a calendar control.

## **4. European Requirements**

## **5. Pre-Conditions**

1. The user has successfully logged in

## **6. Post-Conditions**

## **7. Extension Points**

## **8. J&M Q's**



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<Company Name>

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**Rental Redesign/ECARS 2.0**  
**Use Case Specification: Reservation Notification**  
**(ARMS/UK Call Center)**

**Version 2.1**

<Project Name>	Version: <1.0>
Use Case Specification: <Use-Case Name>	Date: <dd/mmm/yy>
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## Revision History

Date	Version	Description	Author
3/26/01	1.0	Initial Draft of Use Case	M. Pallia
4/2/01	1.1	Finish initial draft of use case	M. Pallia & J. Gaines
4/5/01	1.2	More refinements to the Basic and alternate flows were made.	M. Pallia & J. Gaines
4/6/01	1.3	Changes to the name of the use-case, new alternate of no network connection, print the details alternate, special requirements #1 moved to the brief description.	M. Pallia
4/9/01	1.4	Wording refinements and clarification made per feedback from Cross team review.	J. Gaines & M. Pallia
4/11/01	2.0	User review changes to Title and usage of the Use Case. It was determined that this notification will be used more on a criticality basis rather than an origin basis. The first two reservation types that will have a status are the ARMS and Euro Call Center type reservations. The use case was changed to reflect the new direction.	M. Pallia
4/16/01	2.1	Changed the flow to reflect the European Flow to be identical to the North American Flow. I also made some other format and wording changes to help increase readability.	M. Pallia

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# Use Case Specification: Reservation Notification (ARMS/UK Call Center)

## 1. Reservation Notification (ARMS/UK Call Center)

### 1.1 Brief Description

- 1.1.1 This use case defines the notification system that will alert a user when an "urgent" type reservation exists within the system. The use case will also describe the interactions a user must take to satisfy the notification.

## 2. Flow of Events

### 2.1 Basic Flow

- 2.1.1 The use case begins as soon as the user successfully logs onto the ECARS 2.0 Browser.
- 2.1.2 The system is aware that notification type reservations exist for the default terminal location . The first 2 types of reservations that will receive a notification are:
- Any reservation with that was created within the ARMS system (North America)
  - Any reservation that was created at a UK Call Center (Europe) The UK Call Center Group and Branch Number is UK9Z

If the default terminal location is in Europe, the use case continues at alternate (UK Call Center)

(NOTE: For this iteration, UK9Z is the only branch, but more branches or other reservation types will eventually be added to this notification system.

- 2.1.3 The system determines the status of EACH notification type reservation.

- A) For North America, the status of EACH reservation will be determined by one of the following:
- If the reservation is an ARMS origin type and has NOT been edited/viewed by the user, the reservation status is "Not Contacted"
  - If the reservation is an ARMS origin type and has been edited/viewed but the user was UNABLE to contact the renter, the reservation status is "Contact Attempted"
  - If the reservation is an ARMS origin type and has been edited/viewed but the user was ABLE to contact the renter, the reservation status is "Contacted"

(NOTE: Within the Edit/View use case, the user will determine whether the status of the reservation is "Contact Attempted" or "Contacted.")

- 2.1.4 If more that ONE notification type reservation exists, here are the multiple reservation possibilities:
- One or more of the reservations have a status of "Not Contacted" AND one or more of the reservations have a status of "Contact Attempted". If this is the case, the use case continues at alternate (Not Contacted and Contact Attempted)
  - All of the reservations have a status of "Contacted". If this is the case, the use case continues at alternate (All Contacted)
  - One or more of the reservations have a status of "Contact Attempted" AND NONE of the reservations have a status of "Not Contacted". If this is the case, the use case continues at alternate (Contact Attempted)
  - One or more of the reservations have a status of "Not Contacted". If this is the case, the use case continues within the basic flow.

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2.1.5 The system displays a notification to the user that at least one of the reservations has a status of "Not Contacted". The notification should be visible enough to draw immediate attention. (Almost to the point of annoying the user.)

2.1.6 The user can acknowledge the notification or not acknowledge the notification . If the user does not acknowledge the notification, the use case continues at alternate (Not Contacted - Not Acknowledged).

The system retrieves and displays a summary list of the reservations that caused the notification. he summary list should be displayed in the order in the table below Pick-up Date ☐ Pick-up Time ☐ Renter Name ☐ Bill-To Account Name ☐ Reservation Creation Date\*\* ☐ Reservation Creation Time\*\*  
☐ Reservation Number

The sorting should be done using this method:

- Status – "Not Contacted" followed by "Contact Attempted"
- Pick-up Date – ascending
- Pick-up Time – ascending
- Renter's Name – ascending

NOTE---Sort order for Pick-up date and time is as follows:

- Reservations with a date but no time.
- Reservations with a date and time.
- Reservations with no date but have a time.
- Reservations with no date and no time.

NOTE---Reservations with a status of "Contacted" will NOT be displayed in this summary list.

\*\*These fields are the creation date and time when Legacy added it to the database. NOT when the reservation was added to the Oracle database.

2.1.7 The user has the option to do one or more of the following:

- Edit/view a reservation in the list
- Print the list
- Print the details of a reservation in the list
- Exit

If the user chooses to print the list, the use case continues at alternate (Print). If the user chooses to print the details of a reservation in the list, the use case continues at alternate (Print the Reservation Details). If the user chooses to exit the summary list, the use case continues at (2.1.3) in the Basic Flow. If the user chooses to edit/view, the use case continues.

2.1.8 The system initiates the edit/view use case

2.1.9 The use case continues at 2.1.2 in the basic flow

## **2.2 Alternate Workflows**

### **2.2.1 UK Call Center**

2.2.1.1 The system determines the status of EACH notification type reservation.

A) For Europe, the status of EACH reservation will be determined by one of the following :

- If the reservation was created by the UK Call Center and has NOT been edited/viewed. The reservation status is "Not Contacted"
- If the reservation was created by the UK Call Center and has been edited/viewed but the user was UNABLE to contact the renter, the reservation status is "Contact Attempted"
- If the reservation was created by the UK Call Center and has been edited/viewed but the

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user was ABLE to contact the renter. the reservation status is "Contacted"

(NOTE: Within the Edit/View use case, the user will determine whether the status of the reservation is "Contact Attempted" or "Contacted.")

2.2.1.2 The system has determined the status of each reservation and the use case continues at (2.1.4) in the basic flow.

## **2.2.2 All Contacted**

2.2.2.1 From the basic flow, when the system has ALL reservations that have a status of "Contacted" the system will not display any visible notification to the user . The use case continues at (2.1.2) in the basic flow.

## **2.2.3 Contact Attempted**

2.2.3.1 From the basic flow, when the system finds at least one reservation with a status of "contact attempted" and no reservations with a status of "Not Contacted", the system will display a visible notification to the user. This notification will be less outstanding to the user than the notification used for a "Not Contacted" reservation . (NOTE: The user must also be able to differentiate this notification from the notification used for a "Not Contacted" reservation)

2.2.3.2 The user can acknowledge the notification or not acknowledge the notification . If the user does not acknowledge the notification, the use case continues at alternate (Contact Attempted-Not Acknowledged). Otherwise, the use case continues at (2.1.6) in the basic flow.

## **2.2.4 Print**

2.2.4.1 From the basic flow, the use case includes the Print Reservation Use case . Otherwise, the user can select to do another option at (2.1.7) in the basic flow or the use case continues at (2.1.9) in the basic flow.

## **2.2.5 Print the Reservation Details**

2.2.5.1 From the basic flow, the system initiates the Edit/View use case and the user can select to print the reservation details from there . Otherwise, the user can select to do another option at (2.1.7) in the basic flow or the use case continues at (2.1.9) in the basic flow.

## **2.2.6 Not Contacted - Not Acknowledged**

2.2.6.1 From the basic flow, the system will continue to display the "Not Contacted" notification to the user until the user acknowledges the notification . When the user acknowledges the notification, the use case continues at (2.1.6) in the basic flow.

## **2.2.7 Contact Attempted – Not Acknowledged**

2.2.7.1 From the basic flow, the system will continue to display the "Contact Attempted" notification to the user until the user acknowledges the notification . When the user acknowledges the notification, the use case continues at (2.1.6) in the basic flow.

## **2.2.8 Not Contacted and Contact Attempted**

2.2.8.1 From the basic flow, the system displays the "Not Contacted" notification to the user .

2.2.8.2 The user can acknowledge the notification or not acknowledge the notification. If the user does not acknowledge the notification, the use case continues at alternate (Not Contacted -Not Acknowledged). Otherwise, the use case continues at (2.1.6) in the basic flow.

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### 3. **Special Requirements – Reservation Notification UC**

- The notification should alert the user as close to real time as possible .

### 4. **Pre-Conditions**

- The user has successfully logged onto the ECARS 2.0 Application

### 5. **Post-Conditions**

### 6. **Extension Points**

### 7. **FAQ**

[illegible]



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Use Case Specification: Daily Reservation Summary	Date: 4/27/01
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## Revision History

Date	Version	Description	Author
<04/27/01>	<1.0>	<First Draft of Pick up Summary after it was separated out of the Daily activity use case>	<J. Gaines>

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# Use Case Specification: Daily Reservation Summary

## 1. Daily Reservation Summary

### 1.1 Brief Description

The pickup summary screen is a summary view of the day's reservations for a particular branch. The user will be able to see at a glance the number of reservations the branch has during 30 minute time period, how many of each pick up method for those reservations and how many of each car class for the reservations in the summary.

## 2. Flow of Events

### 2.1 Basic Flow

2.1.1 This use case is initiated when the user elects to view the Pick Up Summary panel.

2.1.2 The system establishes current date and time for the terminal's physical location.

2.1.3 The system establishes current group and branch for the terminal's physical location.

2.1.4 The system retrieves all daily reservations that match the default group/branch for the date and time equal to the branch's current local date and time . If the system retrieves no reservations, the use case continues at alternate flow (No Records).

2.1.5 The system displays the Pick Up Summary table. The system displays to the user the results according to the following headers and sort order for the default group and branch.

The system displays a summary table to the user with the following column headers:

- Time (presented in 30 minute increments)
- Pick Up method (Delivery/Pick Up/ Walk-In)
- Car Class

2.1.6 The system displays the Pick Up Summary table in the following sort order:

- Time (ascending) In 30-minute increments.
- No pick up time entered shown at the top of the list.
- No pick up date entered shown at the bottom of the list.

2.1.7 The information in the summary will be presented to the user so the user can obtain the following information at a glance:

- The Pick Up Summary will show at a glance, how many reservations there are in each half hour time period.
- From the Pick Up Summary, how many of each car class is scheduled to go out per half hour time period. (Note: car classes shown are only the ones found on the reservations retrieved. The only car classes displayed are the ones retrieved from reservations. Car classes not retrieved by the system are not displayed.)
- From this summary the user will be able to see how many of each identified pick up method is scheduled for a time period.
- From this summary, the user will be able to distinguish newly created reservations\* from existing reservations.

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2.1.8 The system will display reservations so all reservations with a pick up time equal to the current date are displayed without scrolling.

The user will be able to see all reservation summaries without scrolling up and down or side to side, including all reservations with that have a pick up date equal to the current date but no pick up time entered on the reservation.

\*A new reservation is one that:

- Natres reservations that are sent during the current day.
- ARMS reservations sent during the current day.
- Branch reservations that are created during the current for the current day.
- Reservations that are transferred from another branch for the current day.
- Reservations that are moved from another day to the current day within the same branch.
- Reservation for the current day that's time has been changed during the current day.
- Reservation that has a creation date equal to the current date.

2.1.9 The user can perform the following options:

- The user chooses to view the list form of the reservations for a particular time, the use case continues at alternate flow (View Reservation List for a Selected Time)
- The user chooses to refresh the list, the use case continues at alternate flow (Refresh)/
- The user can change location. The use case continues at alternate (Change Location)

2.1.10 The use case ends. #

## **2.2 Alternative Flows**

### **2.2.1 No Records**

2.2.1.1 The system displays a zero results list display and the use case continues.

### **2.2.2 View Reservation List for a Selected Time**

2.2.2.1 The user chooses to view the expanded list form for a reservation or group of reservations in a chosen time block.

2.2.2.2 The user clicks on the time he wishes to view reservations for in the Pick Up summary.

2.2.2.3 The system checks the time selected and retrieves the default group/branch reservations that have a pickup time equal to the time selected.

2.2.2.4 This use case includes the Daily Activity use case with the selected starting time.

### **2.2.3 Refresh**

2.2.3.1 The system can be manually refreshed by the user and checks the branch's current local date and time then retrieves and displays any new reservations\* that have a creation date equal to the branch's current local date. These new reservations will display in a manner that make them distinguishable from the other reservations already in the list.

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#### **2.2.4 Change Location**

2.2.4.1 From the main flow, the user can change location. They can change either the group and branch or just the branch within the same group. For Reservation pilot, the user will be able to only change the Branch.

2.2.5 The user selects the branch drop down list from the summary screen .

2.2.6 The system will display the rental branches for the group, defaulting to the current location .

2.2.7 The user selects a branch from the drop down list.

2.2.8 The system will display a view of the selected branch's summary data and the use case continues at (2.1.4) in the basic flow using the entered branch as the current branch.

#### **2.2.9 Change Date**

2.2.9.1 From the main flow, the user changes the start date of the summary list . Once the user selects a new date, the use case continues at (2.1.4) in the basic flow using the entered date as the default date.

### **3. Special Requirements –Reservation Summary UC**

1. The user can click on a time in the Pick Up Summary and "hyperlink" to the expanded Daily Reservation list for the time selected .

2. As in Search Reservation use case, Column Headers are sortable.

3. Types of reservations not shown in the default group/branch daily reservation list are as follows:

- Voided reservations.
- Reservations transferred to another branch.
- Reservations that have been attached to an open ticket .

4. The total number of reservations for the day should be displayed in the Pick Up Summary .

5. Refresh will be manual refresh. Business does not want refresh to interrupt work in an application. Should not refresh while scrolling through a reservation list. Should not refresh so as to be noticeable by the user while working in an application

6. Refresh will also occur automatically when the user leaves the Daily reservation list then returns to the list .

7. A newly created reservation is any reservation with a creation date equal to the local current date .

#### **4. Pre-Conditions**

- The user has successfully logged onto the system.

#### **5. Post-Conditions**

#### **6. Extension Points**

#### **7. Important Questions for Jon and Mary**

## Rental Redesign/ECARS 2.0

### Use Case Specification: Search Reservation

## Version <2.5>

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<document identifier>	

## Revision History

Date	Version	Description	Author
3/15/01	1.0	Initial Draft of Use Case	M.Pallia & J. Gaines
3/16/01	1.1	Revision after initial meeting with Tim Erickson	M.Pallia & J. Gaines
3/24/01	2.0	Final revisions before SA Review	M. Pallia & J. Gaines
3/26/01	2.1	Revisions based on SA review	J. Gaines & M. Pallia
3/27/01	2.2	Revisions based on Cross Team Review	J. Gaines
3/28/01	2.3	Final Revisions based on feedback from Hunt and Howard	J. Gaines
3/28/01	2.4	Final final Revisions based on walkthrough feedback from J. Atteberry	J. Gaines
3/29/01	2.5	Revised based on Jon Jouris review	J. Gaines
4/4/01	2.6	Revisions based on behavioral analysis and screen walk-throughs with John and Mary	J. Gaines
4/5/01	2.7	Revisions based on 2 <sup>nd</sup> behavioral walk-through with Jon and Mary	J. Gaines
4/10/01	2.8	Tagging Requirements in Req Pro from updated use case	J. Gaines
9/7/01	2.9	Changed wording from Telephone Number to Phone Number.	L. Moellman

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## Use Case Specification: Search Reservation

### 1. Search Reservation

#### 1.1 Brief Description

This use case will describe how a user interacts with a system to search for and locate a reservation. It will show the flow of events that occur when a search is conducted to locate a reservation. The system will search for and locate a reservation (or more than one reservation) based on the search criteria entered by a user.

### 2. Flow of Events

#### 2.1 Basic Flow

2.1.1 The use case begins when the user chooses to search for a reservation.

2.1.2 The system defaults the location to the Group and Branch number where the user logged in. {If the user changes location, the use case continues at alternate flow (Change Location)}.

2.1.3 The system displays all search criteria fields emptied out, allowing the user to enter specific search criteria as can be seen in Table's A and B.

Table A

These options are the most commonly selected.

- Driver's Last Name
- Driver's First Name (First name can only be used as a search criteria in conjunction with Last name)
- Phone number (any phone number associated with the driver)
- Reservation Number

(Note: The current group branch location always displays)

Table B

These options are the less frequent options:

- A customer name (Bill-to, Referral, or Shop)
- A customer number (Bill-to, Referral, or Shop)
- Claim Number/Pol/Po No. (this is currently one field)
- A Range of Pick-up Dates ("from" to "to")
- Date reservation taken
- Registration Number of Renter's vehicle (this will not be used in N. America)

(Note: The current group branch location always displays)

2.1.4 The user enters a renter's last name. The system searches for a match on the text, starting from the first position in the field. (There is an implied wildcard at the end of the character set entered but no leading or imbedded wildcards within the character set).

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2.1.5 The use case can continue at alternate flows (Range of Pick Up Dates through Registration Number of Renter's Vehicle). The use case can be read at any of these alternate flows (a user is most likely to search by the criteria in Table A more often than the criteria identified in Table B).

2.1.6 (Note: The user should not be allowed to start a search until one of the search criteria has been entered.)

2.1.7 The system initiates the search engine use case using the criteria entered by the user. The system receives the appropriate processing information from the Search Engine use case.

2.1.8 The system checks the status of the search. If the search has returned more than *n* records, the use case continues at alternate flow (Too Many Records). If the search returned no records, the use case continues at alternate flow (No Matches). If the search has exceeded the time allotted, the use case continues at alternate flow (Time Out). Otherwise, the use case continues along the main flow.

2.1.9 The system displays the results of the search, according to the Default Sort Order (2.3), in summary list form to the user.

2.1.10 The user can perform the following options:

- If the user chooses to print the list, the use case continues at alternate flow (Print the List).
- If the user elects to print the details of a reservation from the list, the use case continues at alternate flow (Print the Reservation Details).
- If the user picks a reservation from the list to edit/view, the use case continues at alternate flow (Edit/View a Reservation).

2.1.11 The use case ends

## **2.2 Alternate Workflows**

### **2.2.1 Change Location**

2.2.1.1 The user is allowed to change location dependant upon his level of security. See security document.

2.2.1.2 From the basic flow (2.1.2), the user can change location by changing the Group and Branch number, or the user can change location by changing just the Branch number. (Note: the user can also select to search "ALL" Group numbers and "ALL" Branches within a specific Group number.

2.2.2 The user selects the branch drop down list.

2.2.3 The system will display the rental branches for the group, defaulting to the current location.

2.2.4 The user selects a branch from the drop down list and the use case continues at (2.1.3) in the basic flow.

### **2.2.5 Too Many Records**

2.2.5.1 From the basic flow (2.1.8), the system has returned more records than the governor allows.

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2.2.5.2 The system displays the first series of records applying default sort order (2.3). UC2.20 The system also displays:

- Total number of records found.
- The system displays a range of records for the series .
- The system displays the ability to navigate to the next series of records.(if applicable)
- The ability to navigate to the previous series of records.(if applicable)

2.2.5.3 The user has the option to do the following:

- View the next series of records .
- View the previous series of records.
- Print the list of the current series or print the reservation details or edit/view a reservation from the list .
- Search again.

2.2.5.4 If the user chooses to view the next series (if applicable), the use case continues at (Too Many Records) . If the user chooses to view the previous series (if applicable), the use case continues at (Too Many Records). If the user chooses to print the list of the current series or print the reservation details or edit/view a reservation from the list, the use case continues at (2.1.10) in the basic flow . If the user chooses to search again, the use case continues at (2.1.3) in the basic flow . Otherwise, the use case continues at (2.1.11) in the basic flow.

## **2.2.6 UC2.6 Time Out**

2.2.6.1 The system displays a message to the user that the time allotted to search has been exceeded.

## **2.2.7 No Matches**

2.2.7.1 From the basic flow (2.1.6), the system will present a message to the user that no records were found for the criteria entered and show a 0 for the total number of records found. .

## **2.2.8 Print the List**

2.2.8.1 From the basic flow (2.1.7.1), the system initiates the Print Use Case Specification Document. The use case continues at (2.1.10) of the basic flow.

## **2.2.9 Print the Reservation Details**

2.2.9.1 From the basic flow (2.1.7.2), the system initiates the Print Use Case Specification Document. The use case continues at (2.1.10) of the basic flow.

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## **2.2.10 Edit/View a Reservation**

2.2.10.1 From the basic flow (2.1.7.3), the system initiates the Edit/View Reservation Use Case Specification Document. The use case continues at (2.1.10) of the basic flow.

## **2.2.11 Search by Pick Up Date Range**

2.2.11.1 The user chooses to search for a reservation(s) by entering the Range of Pick-up Dates on the reservation.

2.2.11.2 If the user only enters a "from" date, the system will default the "to" date to the same day that was entered.

2.2.11.3 The system validates that the "from" date must be less than or equal to the "To" date

2.2.11.4 The system will prompt the user if any of the validations are not correct , otherwise, the use case continues at (2.1.6) in the basic flow.

## **2.2.12 Search by Date Reservation Created**

2.2.12.1 The user chooses to search for a reservation(s) by entering the date the reservation was created.

2.2.12.2 The system searches for a reservation by the entered reservation creation date.

2.2.12.3 The use case continues at (2.1.7) in the basic flow.

## **2.2.13 Search by a Customer Number**

2.2.13.1 The user enters a specific customer number.

2.2.13.2 It has been decided that we will not narrow Customer Number Search by shop, bill-to or referral. The search will search the Bill-To and Shop fields ONLY on the reservation and a reservation that contains a match on any of the 2 fields will be returned.

2.2.13.3 The use case continues at (2.1.6) in the basic flow.

## **2.2.14 Search by an Account Name**

2.2.14.1 The user enters an Account Name. The system searches for a match on the text, starting from the first position in the field . (There is an implied wildcard at the end of the character set entered but no leading or imbedded wildcards within the character set) .

2.2.14.2 The search will search the Bill-To and Shop fields ONLY on the reservation and a reservation that contains a match on any of the 3 fields will be returned

2.2.14.3 The use case continues at (2.1.6) in the basic flow.

## **2.2.15 Search by a Renter Phone Number (any phone number associated with the Renter)**

2.2.15.1 The user enters a renter phone number. (The number entered must be the full number including area code.)

2.2.15.2 The system searches for a reservation with any matching renter phone number regardless of the phone number type (Home, Office, Other). (Match must be exact: no wildcard search.)

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**2.2.16 Search by Claim/Pol/Po No.** The user enters either a Claim/Pol/Po No. in the Claim/Pol/Po field .

**2.2.17** The user enters a Claim/Pol/Po No.. The system searches for a match on the text, starting from the first position in the field. (There is an implied wildcard at the end of the character set entered but no leading or imbedded wildcards within the character set) .

2.2.17.1 The use case continues at (2.1.6) in the basic flow.

**2.2.18 Search by Renter's Vehicle Registration Number/License Plate Number**

2.2.18.1 The user enters a Registration Number/License Plate Number of the Renter's Vehicle .

2.2.18.2 The system searches for a match on the text, applying from left to right on the number of characters for a reservation by the entered Registration Number/License Plate Number of the Renter's Vehicle.

2.2.18.3 The use case continues at (2.1.6) in the basic flow.

**2.2.19 Search by Renter's First Name**

2.2.19.1 The user enters a renter's first name. The system searches for a match on the text, starting from the first position in the field. (There is an implied wildcard at the end of the character set entered but no leading or imbedded wildcards within the character set). (Note: First name field is disabled until a valid value is entered in the last name field).

2.2.19.2 The use case continues at 2.1.5 of the basic flow.

**2.3 Default Sort Order and Column Headers.**

- This is the list of columns to display in the summary list and its sort priority for the first 4 columns:
- Pick up Group (ascending) Concatenate pick up group and branch.
- Pick up Branch (ascending)
- Date (ascending)
- Time (ascending)
- Renter Name (ascending) (Last name, First name) This is the format that renter name will display in the summary list.
- Pick Up Method
- Car Class
- Reservation Type
- Reservation Number

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### **2.3.1 Search by Reservation Number**

2.3.1.1 The user enters a reservation number.

2.3.1.2 The system initiates the Search Engine use case using the reservation number entered.

2.3.1.3 The system searches for an exact match on the number entered starting from the first position in the field.

2.3.1.4 The system receives the appropriate processing information from the Search Engine use case.

2.3.1.5 The use case displays the results of the search according to the default sort order and column headers.

## **3. Special Requirements- Reservation Search UC**

3.2 Any date entered by a user must have a month, day and year . The date search box will be one editable box . The search by date will also display a calendar .

3.3 For the pick up date range, the "TO" date will be deactivated until a "From" date is entered . After a "From" date is entered the "To" date will default to the "From" date entered .

3.4 Per our 4/3 meeting with Jon and Mary, Car class search was deleted from search res criteria.

3.5 Per our 4/5 meeting with Jon and Mary. There will be a link embedded in the Renter Name Column Header of the Summary list that when clicked on will take you into the reservation.

3.6 Per our 4/5 meeting with Jon and Mary. It was decided that on the search panel, the Customer Search Header would be called Account. The field Labels will be Account Name and Customer Number. The two fields will have radio buttons in front of them and upon initial presentation neither option will be selected.

## **4. Pre-Conditions**

4.1 The user has successfully logged onto the system

## **5. Post-Conditions**

## **6. Extension Points**

## **7. FAQ**

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## <Enterprise Rent A Car>

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# ECARS 2.0 Reservation Use Case Specification: <Reservation Home>

Version 1.0





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## Use Case Specification: <Reservation Home>

### 1. Reservation Home

#### 1.1 Brief Description

This use case describes the flow a user takes when interacting with the reservation planning use cases.

### 2. Flow of Events

#### 2.1 Basic Flow

2.1.1 The use case begins when the user successfully logs onto the ECARS 2.0 Reservation Browser.

2.1.2 The system initiates the Daily Activity Use Case

2.1.3 Primarily, the user will only view the displayed data and eventually the data will be manually refreshed. During this time, the user must also have the ability to select other options as well. The options available to the user are:

- Search for a reservation. The use case continues at alternate (Reservation Search)
- Forecast Reservation. The use case continues at alternate (Reservation Forecast)
- Edit a Reservation by entering a Reservation Number. The use case continues at alternate (Reservation Fast Path)
- Pick-up Summary. The use case continues at alternate (Pick-up Summary)
- Create a Reservation (Not Developed Yet). The use case continues at alternate (Create a Reservation)
- Get a Rate (Not Developed Yet). The use case continues at alternate (Get a Rate)
- ARMS/UK Call Center list. The use case continues at alternate (ARMS/UK Call Center)

2.1.4 The user refreshes the data and the use case continues at (2.1.2) in the basic flow. Otherwise, the use case ends.

#### 2.2 Alternative Flows

##### 2.2.1 Reservation Search

2.2.1.1 From the basic flow, the user may not be able to find the reservation they are looking for. The user will select the option to search for a reservation.

2.2.1.2 The system initiates the Reservation Search Use Case.

##### 2.2.2 Reservation Forecast

2.2.2.1 From the basic flow, the user will want to see how many reservations have been made for a particular day or series of days in the near future. The user will select the option to view Reservation Forecasting.

2.2.2.2 The system initiates the Forecast Reservation use case.

##### 2.2.3 Reservation Fast Path

2.2.3.1 From the basic flow, the user has a reservation number they would like to make changes to. Instead of using the search function, the user enters the reservation number into the edit reservation field.

2.2.3.2 The system initiates the Reservation Fast Path use case.

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## **2.2.4 Pick Up Summary**

2.2.4.1 From the basic flow, some branches will find the daily activity list is too detailed or difficult to use because of the large amount of reservations the branch has to manage. The user will opt to use the Pick Up Summary instead of the Daily Activity List.

2.2.4.2 The system initiates the Pick-Up Summary use case. (Note-When the user changes to the pick-up summary view rather than the Daily Activity.

## **2.2.5 Create a reservation**

2.2.5.1 From the basic flow, the user will have a customer that needs to make a reservation. The user will choose to create a new reservation.

2.2.5.2 The system initiates the Create Reservation Use case.

## **2.2.6 Get a rate**

2.2.6.1 From the basic flow, the user will need the ability to get a rate for a customer. The user will select the option to get a rate.

2.2.6.2 The system initiates the Get a Rate use case

## **2.2.7 ARMS/UK Call Center**

2.2.7.1 The user has the ability to access the ARMS reservation list from the Reservation Home. The system initiates the ARMS/UK Call Center use case.

- 3. Special Requirements**
- 4. European Requirements**
- 5. Pre-Conditions**
- 6. Post-Conditions**
- 7. Extension Points**
- 8. J&M Q's**

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# Rental Redesign/ECARS 2.0

## Use Case Specification: Transfer Reservation

Version <1.0>  
Draft

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## Revision History

Date	Version	Description	Author
<dd/mmm/yy>	<x.x>	<details>	<name>
8/15/01	1.0	Initial Draft	Leah Moellman
8/17/01	1.1	Updates after review w/Leanne Bevelhimer	Leah Moellman
8/20/01	1.2	Updates after review w/Jed Gaines	Leah Moellman
8/21/01	1.3	Update from internal review	Leah Moellman
8/24/01	1.4	Update from User review	Leah Moellman
9/06/01	1.5	Removed Drop Fee from use case	L. Moellman
9/13/01	1.6	Added Date/Time Not Entered flow.	L. Moellman
9/26/01	1.7	Removed Date/Time Not Entered Flow.	L. Moellman
11/01/01	1.8	Reworded 2.1.6 and 2.3.5 from user to system displays.	L. Moellman

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# Use Case Specification: Transfer Reservation

## 1. Transfer Reservation

### 1.1 Brief Description

This use case will describe how a user interacts with a system to change the location of a reservation. It will show the flow of events that occur when a reservation changes location.

## 2. Flow of Events

### 2.1 Basic Flow

2.1.1 The use case begins when the user has the option to change the pick up location or the return location of a reservation. If the return location is selected see alternate flow (Change Return Location)

2.1.2 The user may only change branch location for the reservation . (Note: The Pick up group and branch will default to the current location.)

2.1.3 The user selects the branch drop down list for the pick up location field.

2.1.4 The system will display the rental branches for the group, defaulting to the current location . (Note: The Group drop down list will only show the **rental branches** for the group of the physical location.)

2.1.5 The user chooses a branch from the drop down list.

2.1.6 The system displays the following read only branch information:

- Branch address
- Phone number
- Days of normal operation
- Hours of normal operation

The user confirms the branch by selecting or canceling and has the opportunity to reselect.

2.1.7 The system validates the pick up date and time of the existing reservation to the selected branch . (Note: If the user selects a day and time that the branch is not open, use case continues at alternate flow, Date/Time Not Open.)

2.1.8 The system will display a message to the user that the rates of the new location may be different .

2.1.9 The user initiates the change of pick up location .

2.1.10 The system will print the reservation at the new location and the use case ends.

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## 2.2 Alternative Flows

### 2.3 Change Return Branch

2.3.1 The user has the option to change the return location of a reservation .

2.3.2 The user selects the branch drop down list for the return location field.

2.3.3 The system will display the **rental branches** for the group, defaulting to the current location .  
 (Note: The Group drop down list will only show the group of the physical location.)

2.3.4 The user selects a branch from the drop down list .

2.3.5 The system displays the following read only branch information :

- Branch address
- Phone number
- Days of normal operation
- Hours of normal operation

The user confirms the branch by selecting or canceling and has the opportunity to reselect.

2.3.6 The system validates the return date and time of the existing reservation to the selected branch .  
 (Note: If the user selects a day and time that the branch is not open, use case continues at alternate flow, Date/Time Not Open.)

2.3.7 The user initiates the change of pick up location.

2.3.8 The system will print the reservation at the new location and the use case ends.

2.3.9 The user has the option to enter a drop fee for the returning location (see Dates and Rates use case) otherwise use case ends. (Note: The user may choose to change the Pick up Location and Return Location for the same reservation.)

## 2.4 Date/Time Not Open

2.4.1 The user selects to change location to a branch on the date and time that the selected branch is not open.

2.4.2 The system will display a feedback message that "The entered value occurs outside of normal branch hours... Continue?"

2.4.3 The system will display the dates or times entered that are outside of normal branch days and times.

2.4.4 The user has the option to change the date and/or time or let the values remain as entered .

## 3. Natres Reservation

1. The branch cannot transfer a Natres Reservation , only Natres can access these reservations.
2. The system will recognize this is a National Reservation and the transfer capability will beabled.

## 4. ARMS Reservation

1. The branch can transfer an ARMS Reservation to another branch within the group.
2. The ARMS indicator will transfer with the reservation.



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## 5. System Notes

- The user selects the Pick-up Location field and the previously entered location is changed, a system note will be generated when the user selects to save the reservation. The following information will be captured:
  - Date and time that the change was made .
  - Employee number and name that made the change.
  - What text in the location field was changed from and to.
- The user selects the Return Location field and the previously entered location is changed, a system note will be generated when the user selects to save the reservation. The following information will be captured:
  - Date and time that the change was made
  - Employee number and name that made the change .
  - What text in the location field was changed from and to

## 6. Special Requirements

### General Rule Sets

- Any branch within the same group can perform any function on a reservation as if it is their own reservation .
- Changing outside of group for full release only (Based on Security).
- The branch drop down list only displays the branches for the defaulted group .
- The drop down list of branches will be listed in ascending order .

## 7. International Requirements

ARMS does not exist Internationally for pilot.

### UK

- The transfer functionality is the same for UK as for U.S.
- Will need worldwide transfer capability for full release. (Based on Security)

### Germany

- The transfer functionality is the same for Germany as for U.S.
- Will need worldwide transfer capability for full release. (Based on Security)

### Ireland

- The transfer functionality is the same for Ireland as for U.S.
- Will need worldwide transfer capability for full release. (Based on Security)

### Canada

- The transfer functionality is the same for Canada as for U.S.
- Will need worldwide transfer capability for full release. (Based on Security)

## 8. Pre-Conditions

A user is authorized through a login process to access the panel that is necessary to change the location of a reservation.

## 9. Post-Conditions

## 10. Extension Points

## 11. Questions

- What is going to be the authority for transferring from group to group for full release? *Unknown at this time.*
- Is there security around creating a new reservation for another branch?

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*No security check at this time, will remain the same as legacy.*

3. Should the rates of the new branch appear or be updated upon transferring the reservation or should a message be displayed for full release? *A message should display for pilot that rates may be different.*
4. How are we going to handle call centers needing the ability to transfer from group to group for pilot? (ARMS) *No group to group for pilot, will have to for full release.*
5. Should the branch information window display every time or give the user the option to view it? *Branch info. Window will only be displayed if user opts for it to be displayed.*
6. Should there be a message displayed when transferring a reservation that the rates may change for the new location? *A message does need to be displayed for pilot.*
7. Does there need to be an alert message to the transfer branch to alert them of the newly transferred reservation? *An alert message does need to be displayed for pilot.*



in the door picture

Edit View Help

## Supplemental Specs

File Edit View Help

Name	Size	Type	Modified
901 Ancillary Charge Service Detail Design_I3	931KB	Microsoft Word Document	11/5/01 10:32 AM
902 Charge Engine Detail Design_I3	899KB	Microsoft Word Document	11/5/01 10:22 AM
903 Consolidated Products and Rates Design_I3	2,888KB	Microsoft Word Document	11/5/01 10:20 AM
904 Coverage Engine Detail Design_I3	1,536KB	Microsoft Word Document	11/1/01 9:42 AM
905 Data_Conversion_Design_I3	1,584KB	Microsoft Word Document	11/1/01 10:26 AM
906 Equipment Engine Detail Design_I3 (2)	767KB	Microsoft Word Document	11/8/01 3:04 PM
907 General Conditions Detail Design_I3	815KB	Microsoft Word Document	11/1/01 9:12 AM
908 ProductErd	156KB	Microsoft Word Document	8/29/01 4:38 PM
909 RateDetailERD	86KB	Microsoft Word Document	6/1/01 3:30 PM
910 RatesErd	77KB	Microsoft Word Document	6/1/01 3:30 PM
911 Sales Tax Conversion Design	709KB	Microsoft Word Document	11/6/01 9:12 AM
912 Surcharge Engine Detail Design_I3 (2)	634KB	Microsoft Word Document	11/8/01 3:04 PM
913 Tax Engine Detail Design_I3	402KB	Microsoft Word Document	11/5/01 10:10 AM

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ECARS V2.0  
Accurate Out the Door Pricing  
Detailed Design Specification  
Ancillary Charge Engine  
Iteration 3 - Final

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## Gaps Addressed Summary

Gap ID	Functional Area	Brief Description
72	Ancillary Charges (iteration 4)	Data elements need to be added at agreement level to vary YD fee charges.
73	Ancillary Charges (iteration 4)	Data elements need to be added at agreement level to vary Additional Driver fee charges.
133	Ancillary Charges (iteration 3)	YD and Additional driver fees may need to be applied at the Weekly, Monthly, and per Rental rates (see assumptions).
136	Ancillary Charges (Iteration 1)	Interface to pass in Young Driver, Additional Driver, and After Hours info from client GUI.

## Document Control

### Primary Document Owner/Domain

Issued by: (PSC)

Name	Position/Department	Signature	Date
Jack Koomen	Manager/Charge Calculation-Allocation		08/10/01

### Customer Approval

Authorized by: (ERAC)

Name	Position/Department	Signature	Date

## Document History

Version	Date	Author	Reason for Change
1.0	05/20/01	John Jeremiah	Initial draft of Design Document
1.1	05/24/01	John Jeremiah	Incorporate document review comments
1.2	06/07/01	John Jeremiah	Incorporate customer document review changes. Remove Contract related design. Add Fuel price lookup.
1.3	7/26/01	Scotland Allen	Changes for Iteration 2 Addendum
1.4	10/01/01	Scotland Allen	Changes for Iteration 3 Addendum – all stn_id DB columns resized to 10 characters from 6.
1.5	11/01/01	Scotland Allen	Iteration 3 – Final - There were no functional impacts and/or Addendums for Iteration 3.

# 1 Introduction

Ancillary charges are location related charges that are not included in products or packages. Ancillary charge values are not set or maintained by specific contract provisions. The ancillary charge service utilizes rental parameters to identify appropriate ancillary charges. VRS currently implements Young Driver fees, Additional Driver fees, and After Hours fees as ancillary charges. Fuel price determination will be added to the ancillary charge service in order to enable a client application to retrieve, and modify fuel prices prior to creating detailed charges with the Charge Engine.

The ancillary charge service design is based predominantly on the existing VRS ancillary charge logic. Ancillary charge gaps / requirements were not included in the initial business requirements document or the gap analysis. As a result, the initial design effort for the ancillary charges focused on documenting current functionality in order to facilitate determining ERAC's actual requirement for processing ancillary charges. Based on a review of the draft design issues and assumptions, further requirements have evolved and are reflected in this design.

(Note: 1. The iteration 2 implementation of ancillary charges will not be fully functional and will only process ancillary charges for retail cases, hence, handling of contract conditions will not be functionally implemented until iteration 4. Since after hour fees are based predominantly on contractual values, the after hours fee design will be not be implemented in iteration 2 and will be revised for iteration 4. Areas of this design that are not being implemented until future iterations have been grayed out.)

## 1.1 Dependencies

Dependencies with ERAC's Test windows etc.

## 1.2 Data Conversion

High level impacts to Data Conversion. A separate document will be published for data conversion design.

## 1.3 Impact Analysis

The most substantial impact of the ancillary charge design is the relationship that exists between the Ancillary Charge Engine and the Charge Engine. The ancillary charge engine determines specific charges based on rental parameters. The link to the charge engine is through the client application, where the client application can utilize the ancillary charge data as elements of the input parameters for the charge engine.



## 2 Ancillary Charge Service

### 2.1 Process Overview/Flow

The ancillary charge service determines and formats specific additional charges for a rental transaction based on the rental parameters. The following fees are calculated by the service:

- Young drivers:** The age of the driver is compared with age limits established within the UDA hierarchy for specific product type and car class. If the driver is not old enough to rent without a fee being charged, then the system selects the appropriate fee for the UDA-product type-car class combination. In the event that the renter is associated with a contract, the UDA's age limits and/or the young driver fee could be overridden by the contract indicators.
- Additional Drivers:** Charges for additional drivers are determined based on values set within the UDA hierarchy for specific product types. If a renter is associated with a contract, the additional driver fees can be overridden or waived based on contract indicators. In the event that an additional driver is also a young driver, then additional driver would be subject to young driver fees in addition to the additional driver fees.
- Fuel Prices:** The service will find the most appropriate fuel prices based on the UDA hierarchy and desired fuel type.

**After Hours:** Charges for after hours checkout are determined based on the appropriate UDA after hours fee schedule and fee values set in the specific UDA. The European requirement will have fees based on contractual negotiated charges and will not vary by UDA.

### 2.2 Detailed Design Description

The ancillary charge service is currently implemented in VRS as a combination of Pro\*C and PL/SQL that is called from a user exit from Oracle forms. In order to enable the service to be scalable, the ancillary charge service will be implemented as a Tuxedo service. It will provide the calling process as output a list of ancillary charges, suitable for client approval and incorporation into the charge engine input parameters. The calling process will be able to adjust the rate and unit values as needed prior to passing them into the charge engine.

The service will either calculate each individual fee, or it will utilize input values for the specific fees as provided by the calling process. For example, if the calling process were to specify a Young driver Fee of \$10.00, the service would not attempt to calculate or validate the young driver fee. It would accept the value and would then format the fee and prepare it for processing by the charge engine. Alternatively, if the calling process did not specify a Young driver Fee value, the service would determine the fee based on the station's fee and/or contractual override data.

### 2.3 Database Table Impacts

The initial porting of VRS elements for this project did not include the database tables needed to support ancillary charge processing. Subsequently, the ancillary charge tables have been added to the baseline database. In order to support the specific ERAC ancillary charge requirements some modifications to the baseline tables will be required.

Four specific tables will need to be added to the database. Calculation of young driver fees requires the addition both the MIN\_AGE\_RSTRS and YOUNG\_RNT\_OVR tables. Additional driver fees are contained in ADDL\_DVR\_FEES and after-hours rental fees are contained in the STNS\_SCHS table.

(note: STNS\_SCHS contains data about station(branch) operating hours which is probably duplicated in the OFC\_DIR\_BR table in the ECARS Data Model.)

Table Name	High Level Description of Changes	DDL Req Form #
MIN_AGE_RSTRS	Add UDA and Vehicle Category columns	
YOUNG_RNT_OVR	None	
ADDL_DVR_FEES	Add UDA and Fee Type Columns	
STN_SCHS	Add UDA and Fee Type Columns	
CON_IND	Add additional driver and after hours columns to table	
FUEL_PRC	Add UDA hierarchy	

## 2.3.1 DDL Changes

The DDL required to support ancillary charges is based on the existing VRS DDL.

### 2.3.1.1 MIN\_AGE\_RSTRS

The MIN\_AGE\_RSTRS table identifies a UDA's age restrictions and associated young driver fees. The table supports the use of product type (PRT\_PROD\_TYP\_CD), vehicle class (VCA\_CAT\_CD), vehicle class suffix (CAR\_CLS\_SUF\_X\_CDE), and fee type (FEE\_TYP\_CD) in defining the specific fee and age restriction. Each UDA maintains fees for both contract and non-contract young driver fees. Thus, if a contract provides for a young driver override, the fee that is charged is the "C" or contract fee (FEE\_TYPE\_CD) for the specific UDA. The addition of the MAX\_RNTL\_FEE\_AMT attribute has provided a flexible, possibly variable, maximum per rental value. The value could be varied across product lines, age groups or vehicle classes. The system will utilize the value that is found on the row that contains the young renter fee data.

Note: The bty\_typ is a vrs column that is being retained. It will not be directly used in the ERAC implementation.

Table Name : MIN\_AGE\_RSTRS      Alias : MAR  
Display Title : Young driver age info. And fees applied at  
the uda level for each car class.

#### Column Summary

Col. Seq.	Column	Null ?	Type
1	STRT_DT	NOT NULL	DATE
2	STA_STN_ID		VARCHAR2 (10)
3	UDA_AREA_ID	NOT NULL	VARCHAR2 (10)
4	UDA_ATY_AREA_TYP	NOT NULL	VARCHAR2 (10)
5	VCA_CAT_CD	NOT NULL	VARCHAR2 (8)
6	CAR_CLS_SUF_X_CDE	NOT NULL	VARCHAR2 (4)
7	BTY_TYP	(NULL)	VARCHAR2 (2)
8	PRT_PROD_TYP_CD	NOT NULL	VARCHAR2 (2)
9	FEE_TYPE_CD	NOT NULL	VARCHAR2 (1)
10	REQ_AGE	NOT NULL	NUMBER (3)
11	MIN_DVG_LIC_PRD		NUMBER (3)
12	CRY_ARIMP_CRY_CD		VARCHAR2 (2)
13	END_DT		DATE
14	MAX_AGE		NUMBER (3)
15	YNG_RNTR_FEE		NUMBER (15, 3)
16	MAX_RNTL_FEE_AMT		NUMBER (15, 3)

Primary Key

Name	Column
MAR_PK	STRT_DT
MAR_PK	UDA_AREA_ID
MAR_PK	VCA_CAT_CD
MAR_PK	CAR_CLS_SUF_X_CDE
MAR_PK	FEE_TYPE_CD
MAR_PK	REQ_AGE
MAR_PK	PRT_PROD_TYP_CD

Foreign Keys

MAR\_APPLICABLE\_IN

CRY\_ARIMP\_CRY\_CD references CRYC.ARIMP\_CRY\_CD

Transferable ? :True ; Mandatory ? :True ;  
Update Rule :Restricted ; Delete Rule :Restricted ;

MAR\_FOR

VCA\_CAT\_CD references VHCL\_CATS.CAT\_CD  
Transferable ? :True ; Mandatory ? :True ;  
Update Rule :Restricted ; Delete Rule :Restricted ;

MAR\_HVC\_FK

STRT\_DT references INV\_HIER\_VHCL\_CAT.EFF\_DT  
VCA\_CAT\_CD references INV\_HIER\_VHCL\_CAT.VCA\_CAT\_CD\_HIER  
Transferable ? :True ; Mandatory ? :True ;  
Update Rule :Restricted ; Delete Rule :Restricted ;

MAR\_UDA\_FK

UDA\_AREA\_ID references USR\_DFND\_AREAS.AREA\_ID  
UDA\_AREA\_TYP references AREA\_TYPES.AREA\_TYP  
Transferable ? :True ; Mandatory ? :True ;  
Update Rule :Restricted ; Delete Rule :Restricted ;

Index Summary

Name	Seq.	Column	Unique ?
MAR_PK_I	1	UDA_AREA_ID	UNIQUE
MAR_PK_I	3	VCA_CAT_CD	UNIQUE
MAR_PK_I	4	VCA_CLASS_SFX	UNIQUE
MAR_PK_I	4	STRT_DT	UNIQUE
MAR_PK_I	6	FEE_TYPE_CD	UNIQUE
MAR_PK_I	7	REQ_AGE	UNIQUE
MAR_PK_I	8	BTY_TYP	UNIQUE
MAR_PK_I	9	PRT_PROD_TYP_CD	UNIQUE



### 2.3.1.3 ADDL\_DVR\_FEES

The ADDL\_DVR\_FEES table identifies a station's additional driver fees. The actual additional driver fee is based on the UDA ID and area type, the fee type (FEE\_TYPE\_CD), the product type (PRT\_PROD\_TYP\_CD), and the number of additional drivers (BEGIN\_QTY\_NBR and END\_QTY\_NBR), as qualified by valid start and end dates (START\_DT and END\_DT).

Table Name : **ADDL\_DVR\_FEES** Alias : ADF  
Display Title : Addl Dvr Fees Variable Additional  
Driver fees applied at the station level.

#### Column Summary

Col. Seq	Column	Nulls ?	Type
1	UDA_AREA_ID	NOT NULL	VARCHAR2 (10)
2	UDA_ATY_AREA_TYP	NOT NULL	VARCHAR2 (10)
3	START_DT	NOT NULL	DATE
4	PRT_PROD_TYP_CD	NOT NULL	VARCHAR2 (2)
5	FEE_TYPE_CD	NOT NULL	VARCHAR2 (1)
6	BEGIN_QTY_NBR	NOT NULL	NUMBER (12)
7	FEE_NBR	NOT NULL	NUMBER (15, 4)
8	FEE_UNIT_CD	NOT NULL	VARCHAR2 (1)
9	END_DT		DATE
10	END_QTY_NBR		NUMBER (12)
11	MAX_RENTAL_FEE_AMT		NUMBER (15, 3)
12	STA_STN_ID		VARCHAR2 (10)

#### Primary Key

Name	Column
ADF_PK	UDA_AREA_ID
ADF_PK	START_DT
ADF_PK	FEE_TYPE_CD
ADF_PK	PRT_PROD_TYP_CD
ADF_PK	BEGIN_QTY_NBR

#### Foreign Keys

##### ADF\_UDA\_FK

UDA\_AREA\_ID references USR\_DFND AREAS.AREA\_ID  
UDA\_AREA\_TYP references AREA\_TYPES.AREA\_TYP  
Transferable ? :True ; Mandatory ? :True ;  
Update Rule :Restricted ; Delete Rule :Restricted ;

#### Index Summary

Name	Seq.	Column	Unique ?
ADF_PK_I	2	UDA_AREA_ID	UNIQUE
ADF_PK_I	3	START_DT	UNIQUE
ADF_PK_I	4	PRT_PROD_TYP_CD	UNIQUE
ADF_PK_I	5	FEE_TYPE_CD	UNIQUE
ADF_PK_I	6	BEGIN_QTY_NBR	UNIQUE

### 2.3.1.4 STN\_SCHEDS

The STN\_SCHEDS table contains station operating hours and information used to determine after hours rates. The station service level code (SLC\_SYS\_LVL\_CD) and open hour type code (OPEN\_HR\_TYP) are used in determining the appropriate after hour fee to charge.

Table Name : STN\_SCHEDS Alias : SSC  
Display Units : None Filter: No Initial Data

#### Column Summary

Col. #	Col. Name	Col. Type	Col. Length
1	SCHED_SEQ	NUMBER	4
2	STATION_ID	NUMBER	4
3	SLC_SYS_LVL_CD	NUMBER	4
4	OPEN_HR_TYP	NUMBER	4
5	DATE	DATE	8
6	TIME	TIME	4
7	AREA_ID	NUMBER	4
8	AREA_TYP	NUMBER	4
9	AREA_ID	NUMBER	4
10	AREA_TYP	NUMBER	4
11	AREA_ID	NUMBER	4
12	AREA_TYP	NUMBER	4
13	AREA_ID	NUMBER	4
14	AREA_TYP	NUMBER	4
15	AREA_ID	NUMBER	4
16	AREA_TYP	NUMBER	4

Primary Key  
Name : STN\_SCHEDS  
SSC\_SEQ

#### Index

SSC_SEQ	PK
STATION_ID	FK
SLC_SYS_LVL_CD	FK
OPEN_HR_TYP	FK
DATE	FK
TIME	FK

#### Foreign Keys

SSC\_SEQ FK

STA\_AREA\_ID references STA\_AREA\_ID  
STA\_AREA\_TYP references STA\_AREA\_TYP  
Transferable : True / Mandatory : True  
Update Rule : Restricted / Delete Rule : Restricted

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4	FTY_FUEL_TYP_CD	NOT NULL	VARCHAR2(2)
5	STRT_DT	NOT NULL	DATE
6	FUEL_PRC_TYP	NOT NULL	VARCHAR2(1)
7	CRY_ARIMP_CRY_CD		VARCHAR2(2)
8	END_DT		DATE
9	LIT_COST		NUMBER(15,3) (DEFAULT 0)

## Primary Key

UDA\_AREA\_ID, UDA\_AREA\_TYP, STRT\_DT, FTY\_FUEL\_TYP\_CD, FUEL\_PRC\_TYP

## Indexes

FPR\_PK UNIQUE  
UDA\_AREA\_ID  
UDA\_AREA\_TYP  
FTY\_FUEL\_TYP\_CD  
STRT\_DT  
FUEL\_PRC\_TYP

## Foreign Keys

FPR\_LEVIED\_IN (CRY\_ARIMP\_CRY\_CD) REFERENCES CRY\_S (ARIMP\_CRY\_CD)

## Check Constraints

SYS\_C002931 (fuel\_prc\_typ IN ('R', 'F'))

## 2.3.2 Reference Data

Domain values for various columns in tables used by the ancillary charge service will be stored in the CG\_REF\_CODES table.

### 2.3.2.1 Minimum Age Restrictions – MIN\_AGE\_RSTRS

#### 2.3.2.1.1 PRT\_PROD\_TYP\_CD

The product type is used to identify the type of product that characterizes this rental transaction and takes the same domain values as "Default Type" which is defined in the glossary. The code is a 2 character code, and will be defined in PROD\_TYPS table.

## Possible Values for Product Type:

Value	Meaning
B	Bodyshop
C	Corporate
D	Dealership
G	Government
I	Insurance
R	Retail

#### 2.3.2.1.2 FEE\_TYP\_CD

The fee type code is used to identify if a fee is a "S" station or standard young driver fee or a "C" contract fee. The domain values are stored in the CG\_REF\_CODES table with a RV\_DOMAIN value of MIN\_AGE\_RSTRS.FEE\_TYPE\_CD.

Value	Meaning
S	Standard or Station fee
C	Contract fee



### 2.3.2.2 Young Renter Override – YOUNG\_RNT\_OVR

#### 2.3.2.2.1 OVERRIDE\_IND

The override indicator in the YOUNG\_RNT\_OVR table is used to determine if a contract has a young renter fee waive provision. If the value of the flag is "Y", then all young renter fees will be waived. If the flag is "N", then the station's "C" fee will be charged for the young driver. The domain values for the override indicator are stored in the CG\_REF\_CODES table with a RV\_DOMAIN value of YOUNG\_RNT\_OVR.OVERRIDE\_IND.

Value	Meaning
Y	Waive young renter fee
N	Do not waive young renter fee. Young renter will be charged the "C" fee for the specific UDA.

### 2.3.2.3 Additional Driver Fees – ADDL\_DVR\_FEES

#### 2.3.2.3.1 PRT\_PRD\_TYP\_CD

The product type is used to identify the type of product that characterizes this rental transaction and takes the same domain values as "Default Type" which is defined in the glossary. The code is a 2 character code, and will be defined in PROD\_TYPS table.

Possible Values for Product Type:

Value	Meaning
B	Bodyshop
C	Corporate
D	Dealership
G	Government
I	Insurance
R	Retail

#### 2.3.2.3.2 FEE\_TYP\_CD

The fee type code is used to identify if a fee is a "S" station or standard additional driver fee or a "C" contract fee. The domain values are stored in the CG\_REF\_CODES table with a RV\_DOMAIN value of ADDL\_DVR\_FEES.FEE\_TYPE\_CD.

Value	Meaning
S	Standard or Station fee
C	Contract fee

### 2.3.2.4 Station Schedule – STN\_SCHLDS

#### 2.3.2.4.1 PRT\_PRD\_TYP\_CD

PRD\_Typ is used to identify the type of product that characterizes this rental transaction and takes the same domain values as "Rental Type". The code is a 2 character code, and will be defined in CG\_REF\_CODES under the domain of STN\_SCHLDS.PRD\_TYP.

Value	Meaning
BS	Bodyshop
CP	Corporate

DS	Dealership
GO	Government
IN	Insurance
RT	Rental

#### 2.3.2.4.2 FEE TYPE CD

The fee type code is used to identify if a fee is a "S" station or standard after hours fee or a "C" contract fee. The domain values are stored in the CG REF CODES table with a RV DOMAIN value of 8 IN SCHEDS FEE TYPE CD.

Value	Meaning
S	Standard or Station fee
C	Contract fee

#### 2.3.2.4.3 DAY OF THE WK

The day of the week code is used to identify the specific day of the week that a row in the table references. The domain values are stored in the CG REF CODES table with a RV DOMAIN value of 8 IN SCHEDS DAY OF THE WEEK.

Value	Meaning
1	Sunday
2	Monday
3	Tuesday
4	Wednesday
5	Thursday
6	Friday
7	Saturday

#### 2.3.2.5 Contract Indicators - CONS IND

##### 2.3.2.5.1 ADDL DVR IND

The additional driver indicator in the contract indicators table is used to determine if the contract does or does not support additional driver provisions. The indicator also determines how the additional driver fee should be applied in the case where the contract does support additional driver fees. The code is a 1 character code and will be defined in CG REF CODES under the domain of CONS IND ADDL DVR IND.

Value	Meaning
S	The contract does not support additional driver fees. Charge the "Station" or standard additional driver fee.
C	The contract supports lower additional driver fees. Charge the "Contract" additional driver fee that is defined for the LDA.
W	The contract supports waiving the additional driver fee. Do not charge an additional driver fee.

##### 2.3.2.5.2 AFTER HR IND

The after hour fee indicator in the contract indicators table is used to determine if the contract does or does not support after hour fee provisions. The indicator also determines how the after hour fee should be applied in the case where the contract

does support after hour fees. The code is a 1 character code and will be defined in CG\_REF\_CODES under the domain of CONS\_IND\_AFTER\_HR\_IND.

Value	Meaning
S	The contract does not support after hours fees. Charge the "Standard" or standard after hours fee.
C	The contract supports lower after hours fees. Charge the "Contract" after hours fee that is defined for the ULA.
A	The contract supports waiving the after hours fee. Do not charge an after hours fee.

## 2.3.2.6 FUEL\_PRCS

### 2.3.2.6.1 FTY\_FUEL\_TYP\_CD

The Fuel Type Code specifies the type of fuel that is to be priced. The code is a 2 character code used to specify the type of fuel that the price refers to. The domain values will be defined in CG\_REF\_CODES under the domain of FUEL\_PRCS.FTY\_FUEL\_TYP\_CD.

Value	Meaning
UL	Unleaded
DL	Diesel
LD	Leaded

### 2.3.2.6.2 FUEL\_PRC\_TYP

The Fuel Price Type is used to identify the refueling option, Pre-Paid or Post-Paid, that the price is associated with. The code is a 1 character code. The domain values will be defined in CG\_REF\_CODES under the domain of FUEL\_PRCS.FUEL\_PRC\_TYP.

Value	Meaning
F	Pre-Paid Fuel
P	Post-Paid Fuel

## 3 Ancillary Engine

### 3.1 Inputs

Ancillary Charges Service Input Parameters - Version : 01.00				Technical		Source of Data
Input Parameter	Notes	FML Field Name		Type	Size	
Standard Header	The content of this header will be used for debugging, user test support, performance monitoring, tuning and error logging	refer to standard header document for layout and population rules	Mandatory			All Clients
View Version String	Identification string for this TUX server	FN_ACHG_VIEW_VERSION	Mandatory	char	100	Tux View
co_svc_lvl_code	Method of Delivery	FN_ACHG_CO_SVC_LVL_CDE	Mandatory	char	3	Client App
ci_svc_lvl_code	Method of Delivery	FN_ACHG_CI_SVC_LVL_CDE	Mandatory	char	3	Client App
dvr_age	Driver's age in years	FN_ACHG_DVR_AGE	Mandatory	long	4	Client App
cntr_id	Contract id associated with this driver	FN_ACHG_CON_ID	Optional	long	4	Client App
stn_id	Pick Up station id	FN_ACHG_STN_ID	Mandatory	char	11	Client App
co_stn_cntry_code	Pick Up station country code	FN_ACHG_CNTRY	Mandatory	char	3	Client App
co_stn_curr_code	Pick Up station currency code	FN_ACHG_CURR	Mandatory	char	4	Client App
co_stn_PRD_typ	Pick Up station rental type	FN_ACHG_STN_PRD_TYP	Mandatory	char	3	Client App
stn_area_list	List of UDAs which a station /branch belongs to.	FN_ACHG_UDA_LIST	Optional	char	4501	Rate Engine
vehicle category code	The vehicle category.	FN_ACHG_VHCL_CLASS	Mandatory	char	9	Client App
vehicle_class_suffix	The vehicle category suffix	FN_ACHG_VHCL_CL_SFX	Mandatory	char	5	Client App
pick_up_date	Pick up date and time. Would be projected checkout date and time for a reservation.	FN_ACHG_PU_DATE	Mandatory	char	13	Client App
return_date	Return date and time. Would be projected checkout date and time for a reservation. - Either Return date or rental_dur are required.	FN_ACHG_RD_DATE	Mandatory	char	13	Client App
rental_dur	The rental duration in days.	FN_ACHG_RNT_DUR	Optional	long	4	Rate Engine
Yng_dvr_Geographic Override	Indicates that the geographic location young driver values overrides all contractual values. Default value = N	FN_ACHG_YNG_DVR_GEOG_OVR	Optional	Char	2	Client App
Fuel_Type	Indicates the type of fuel that the service should price	FN_ACHG_FUEL_TYPE	Optional	Char	3	Client App
yng_dvr_amt	Young driver charge amount. A value of -1 causes the service to	FN_ACHG_YNG_RNTR_AMT	Mandatory	double	8	Client App

Ancillary Charges Service Input Parameters – Version : 01.00				Technical		Source of Data
Input Parameter	Notes	FML Field Name		Type	Size	
	calculate the amount and unit type. Any other value will be accepted by the service and used in the output charge structure					
yng_dvr_unit_typ	Young driver charge unit type. Required when the calling process is specifying a yng_rntr_amt other than -1. (per day or per rental)	FN_ACHG_YNG_RNTR_UNIT_TYP	Optional	char	2	Client App
nbr_adtl_dvrs	The number of additional drivers on the rental. A value of zero indicates no additional drivers.	FN_ACHG_NBR_ADTL_DVRS	Mandatory	long	4	Client App
adtl_dvr_amt	Additional driver charge amount. A value of -1 causes the service to calculate the amount and unit type. Any other value will be accepted by the service and used in the output charge structure. Required when nbr_adtl_dvrs is greater than zero.	FN_ACHG_ADTL_DVR_AMT	Optional	double	8	Client App
adtl_dvr_unit_typ	Additional driver charge unit type. Required when the calling process is specifying a adtl_dvr_amt other than -1. (per day or per rental)	FN_ACHG_ADTL_DVR_UNIT_TYP	Optional	char	2	Client App
after_hrs_amt	After hours charge amount. A value of -1 causes the service to calculate the amount and unit type. Any other value will be accepted by the service and used in the output charge structure.	FN_ACHG_AFTER_HRS_AMT	Mandatory	double	8	Client App
after_hrs_unit_typ	After hours charge unit type. Required when the calling process is specifying a after_hrs_amt other than -1. (per rental only)	FN_ACHG_AFTER_HRS_UNIT_TYP	Optional	char	2	Client App

**Note:** Character field sizes include space for null terminator.

## 3.2 Outputs

The output of the Ancillary charge engine is structured such that it is similar to the input parameters for the Charge Engine. In the cases where a Max Per Rental fee is applicable, the system will output a record that contains the per day charges and the Max Per Rental charge. This service **will not** attempt to optimize the per- day and max per rental charges. It would be possible to have a \$20 per day charge with a 10 day duration (i.e \$200 total) and a max per rental value of \$50. These base values per day charge, duration, and max per rental will be optimized by the Charge Engine when it is called. The reason that these values are not optimized by the Ancillary charge service is because of the likelihood that the branch employee may choose to modify the values that are returned by the Ancillary charge engine.

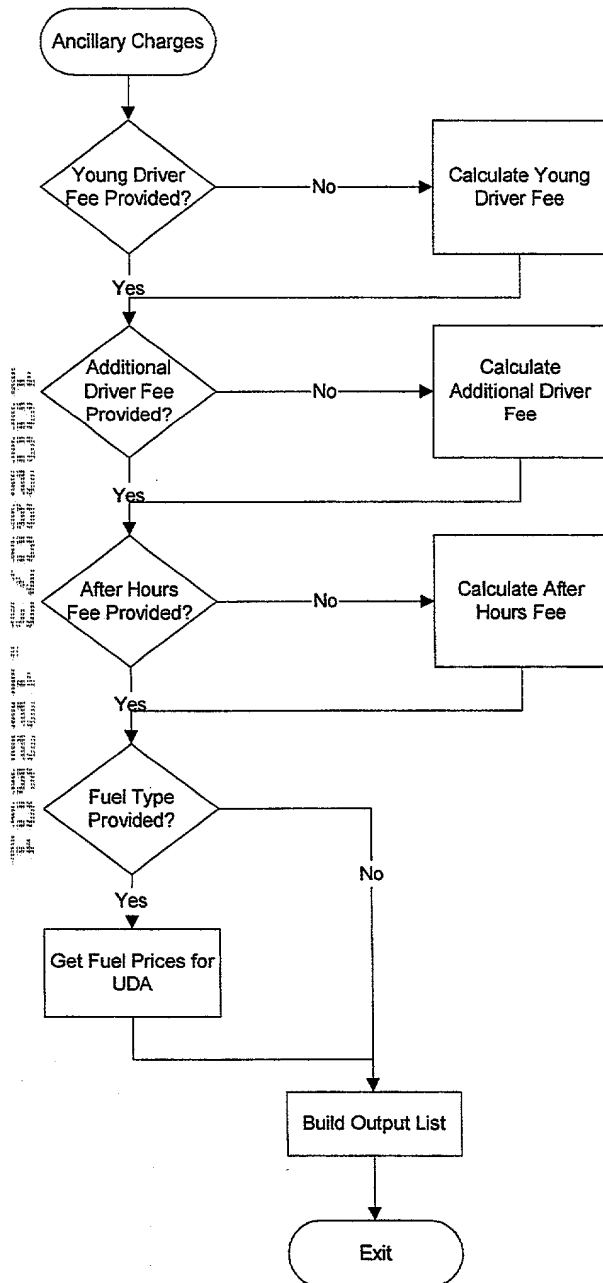
Ancillary Charges Service Output Parameters - Version : 01:00				Technical		Source of Data
Output Parameter	Notes	FML Field Name		Type	Size	
number of Records (0 - 15)	Number of Ancillary records to process	FN_ACHG_NUM_ANCL_ITEMS	Mandatory	long	4	Ancillary
error_no[16]	Server error Code or 0	FN_ACHG_ERR_STATUS	Mandatory	long	4	Ancillary
err_text[16]	Server Error Text	FN_ACHG_ERR_MESSAGE	Optional	char	81	Ancillary
sql_error_no[16]	DB Error code as applicable	FN_ACHG_SQL_ERR_STATUS	Optional	long	4	Ancillary
sql_error_text[16]	DB Error Text as applicable	FN_ACHG_SQL_ERR_MSG	Optional	char	81	Ancillary
charge_id[16]	Charge id. A sequence number that differentiates charges in the list	FN_ACHG_ID	Mandatory	long	4	Ancillary
charge_desc[16]	Description of the charge.	FN_ACHG_DESC	Mandatory	char	36	Ancillary
charge_amt[16]	Charge unit amount.	FN_ACHG_AMT	Mandatory	double	8	Ancillary
max_per_rental[16]	The maximum per rental value, if available.	FN_ACHG_MAX_PER_RNTL	Optional	double	8	Ancillary
currency_code[16]	Currency code ( USD, CAD, etc...)	FN_ACHG_CURR_CDE	Mandatory	char	4	Client App
rcd_chg_typ[16]	Charge type code.	FN_ACHG_CHG_TYPE	Mandatory	char	6	Ancillary
chg_unit_typ[16]	Unit type (D=per day,R=Per Rental Max,C=%-based)	FN_ACHG_UNIT_TYPE	Mandatory	char	1	Ancillary
start_dt[16]	Start date (YYYYMMDD24HHMM)	FN_ACHG_ST_DATE	Mandatory	char	13	Client App
end_dt[16]	End date (YYYYMMDD24HHMM)	FN_ACHG_END_DT	Mandatory	char	13	Client App
charge_duration[16]	Duration of the charge in the number of charge units.	FN_ACHG_DRTN	Mandatory	long	4	Ancillary
NumFuelPrices (0-4)	The number of fuel price records returned. 1- 5 items	FN_FUEL_PRC_ITEMS	Mandatory	Long	4	Ancillary
Error_no[5]	Server error Code or 0	FN_ACHG_SVC_ERR_STATUS	Optional	long	4	Ancillary
Err_text[5]	Server Error Text	FN_ACHG_SVC_ERRMESSAGE	Optional	char	81	Ancillary

Ancillary Charges Service Output Parameters – Version : 01.00				Technical		Source of Data
Output Parameter	Notes	FML Field Name		Type	Size	
sql_error_no[5]	DB Error code as applicable	FN_ACHG_SVC SQLERRSTATUS	Optional	long	4	Ancillary
sql_error_text[5]	DB Error Text as applicable	FN_ACHG_SVC SQLERRMSG	Optional	char	81	Ancillary
Fuel Payment Type[5]	The type of fuel payment option (Pre Paid, Post Paid or Pump price)	FN_FUEL_PAY_TYPE	Optional	Char	2	Ancillary
Fuel Price[5]	The price per unit of fuel.	FN_FUEL_PRICE	Optional	Double	8	Ancillary

Note: Character field sizes include space for null terminator.

### 3.3 Detailed Process Flow

The Ancillary charge service determines specific ancillary charges and then formats the charges into a structure, which will be used as input to the charge engine. The service will support a calling process passing in a specific value for a charge item.



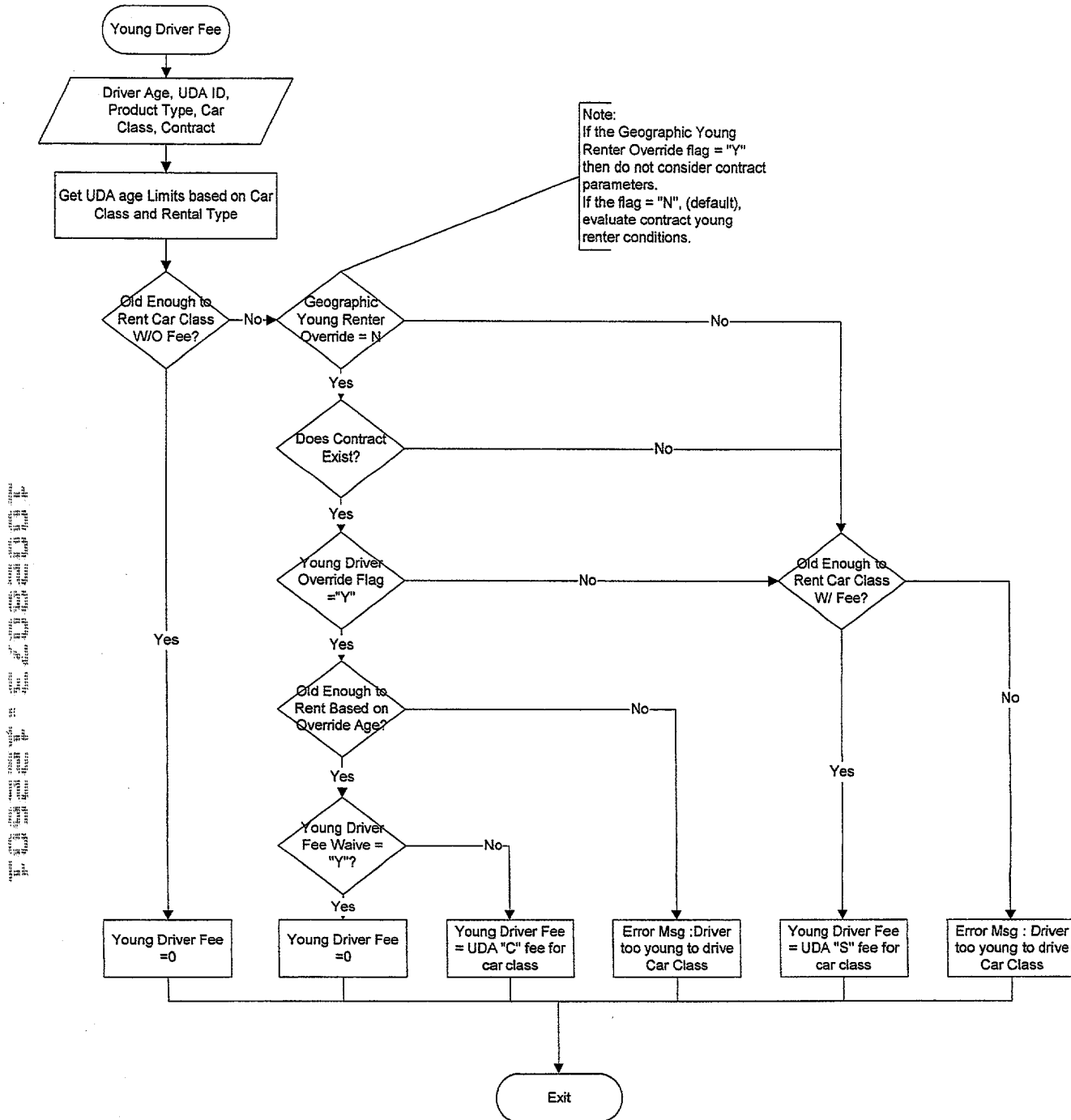


## 3.4 Sub Functions

### 3.4.1 Young Driver Fee Process Flow:

Young driver fees are calculated based on age ranges, car classes, car class suffixes, product types, and fee types established and maintained in the UDA hierarchy. There are two types of young driver fees. One set of fees, "S" (standard) fees, are applied in cases where the young driver does not have a contract that overrides the UDA young driver conditions. The second type of young driver fee is a contract fee, "C". "C" fees are applied whenever a young driver has a contract that overrides the UDA's young driver conditions, but does not override the young driver fee.

The UDA hierarchy search will be designed so that data at the lowest level will take precedence. Thus, if a branch establishes young driver fees, they will in effect override the values established at higher levels of the UDA hierarchy. In the case where no records are found in the UDA hierarchy, the system will return **no restrictions and a fee of zero**.



The main database entity that drives the young driver fee logic is the Minimum Age Restriction table (MIN\_AGE\_RSTRS). If an UDA desires to set explicit young driver restrictions or fees, the restrictions are stored in the MIN\_AGE\_RSTRS table. Each rental station contains young driver fee data that is derived by vehicle category (VCA\_CAT\_CDE), rental type (PRD\_TYP), and the young driver fee type (FEE\_TYPE\_CD). The young driver fee type is either "S" for the UDA standard young driver fee, or a "C" for the UDA's contract override young driver fee. Rental type is used in the case where young driver fees or age limits differs for different product types. Some rental types are Retail, Insurance Replacement, or Corporate.

The following is a representation of sample data from MIN\_AGE\_RSTRS where a group has established cases where young renter fees should not be charged. One of the branches in the group, has opted to override the young driver limit for insurance product, and has also established young renter fees for retail rentals of specific car classes.

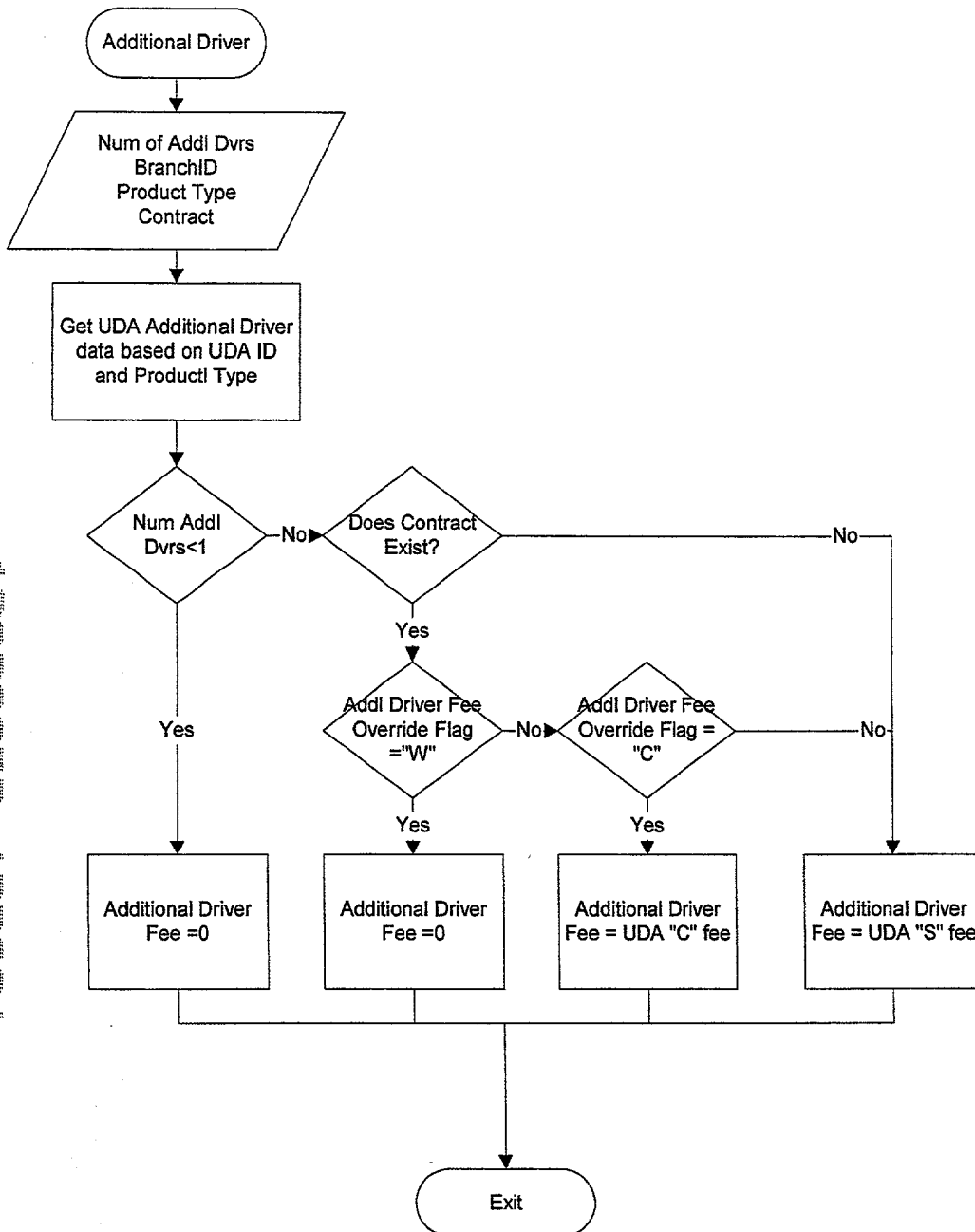
UDA_ARE A_ID	UDA_AREA_TYP	VCA_CAT CDE	VCA_C CLASS SFX	PRD TYP	FEE_TY PE_CD	REQ_AGE	MAX_AGE	YNG RNTFR FEE	RENTAL MAX_FEE
01	ATY_GROUP	ACAR	**	RT	C	25	99	0	75
01	ATY_GROUP	ACAR	**	RT	S	25	99	0	75
01	ATY_GROUP	ACAR	**	IN	C	23	99	0	75
01	ATY_GROUP	ACAR	**	IN	S	23	99	0	75
01	ATY_GROUP	ACAR	**	CP	C	25	99	0	75
01	ATY_GROUP	ACAR	**	CP	S	25	99	0	75
0101	ATY_BRANCH	ACAR	**	IN	C	25	99	0	75
0101	ATY_BRANCH	ACAR	**	IN	S	25	99	0	75
0101	ATY_BRANCH	CCAR	**	RT	S	21	24	25	75
0101	ATY_BRANCH	ECAR	**	RT	S	21	24	25	75
0101	ATY_BRANCH	FCAR	**	RT	S	21	24	25	75
0101	ATY_BRANCH	ICAR	**	RT	S	21	24	25	75
0101	ATY_BRANCH	SCAR	**	RT	S	21	24	25	75
0101	ATY_BRANCH	PCAR	**	RT	S	21	24	50	100

### 3.4.2 Additional Driver Process Flow:

Additional driver fees are calculated based on the number of additional drivers and product type information established and maintained in the UDA hierarchy.

The UDA hierarchy search will be designed so that data at the lowest level will take precedence. Thus, if a branch establishes additional driver fees, they will in effect override the values established at higher levels of the UDA hierarchy. In the case where no records are found in the UDA hierarchy, the system will return a fee of zero.

Similar to young driver, there are two types of additional driver fees- "S" -standard fee and "C" contract override fees. This process is different from young renter fees in that a single contract indicator is used to determine which fee to select. The ADDL\_DVR\_IND indicator in the CONS\_IND table could contain the following values: "W" - Waive Fee, "C" - Use Contract fee, or "S" - Use standard fee.



Additional drivers are calculated based on values set and maintained in the UDA hierarchy. The additional driver fee calculation process does not take into account the age of the additional drivers. In order for a young driver fee to be determined for an additional driver, the client application will need to specifically call the engine with the additional driver age information in order to calculate the additional young driver fees if appropriate.

### 3.4.3 After Hours Flow Chart

After hours fees are based on values established and maintained in the UDA hierarchy for the rental check-out branch. The UDA hierarchy search will be designed so that data at the lowest level will take precedence. Thus, if a branch establishes after hours fees, they will in effect override the values established at higher levels of the UDA hierarchy. In the case where no records are found in the UDA hierarchy, the system will return a fee of zero.

<Flowchart deleted>

The main database entity that drives the after hours fee logic is the Stations Schedules table (STNS\_SCHEDS). The table is designed to implement the UDA hierarchy and supports a upper level UDA establishing after hours fees and times for their subordinate UDAs. UDAs at lower levels of the hierarchy effectively override higher levels of the hierarchy by adding specific data to the STNS\_SCHEDS table.

The STNS\_SCHEDS table is used in this design to provide after hours fee information, not branch operating hours which appears to be maintained in the OFC\_DIR\_BR table. The relationship between branch operating hours and after hour fees must be considered in determining the GUI sequence of events, calls. Specifically, the case where a branch supports after hours check-out with a fee, must be handled when and if the GUI finds that the rental check-out time is outside of the branch operating hours.

The example on the following page illustrates data set for a group and branch with the branch overriding the group's settings. The OPEN\_TMSP and CLOSE\_TMSP fields are used to indicate time windows of times when a fee is to be charged or not charged, depending on the AFTER\_HR\_FLG value. The units used for the timestamp fields is seconds from midnight. In the example, the following after hours fees are established:

#### Group 99 Settings:

Charge an after hours fee for counter service (CN) between the hours of 6 pm and 8 am. This results in 2 rows in the table. One row contains data for day 1 from closing time to midnight, and the second row covers day 2 from midnight to opening time).

- Standard Retail after hours fee: \$15
- Contract Retail after hours fee: \$5
- Standard Insurance after hours fee: \$10
- Contract Insurance after hours fee: \$5

#### Branch 9901 settings are:

- Charge an after hours fee for counter service (CN) between the hours of 8 pm and 8 am.
- Standard Retail after hours fee: \$20
- Contract Retail after hours fee: \$10
- Standard Insurance after hours fee: \$15
- Contract Insurance after hours fee: \$10

#### Branch 9902 settings are:

- Do not charge an after hours fee for counter service (CN).

In the case where a UDA is overriding a higher UDA's values, the application will not take hours from one level of the table and then search for a fee at a different level. The UDA that is overriding must include all fee information.

1. The following information is a representation of sample data from a SIN system.

The following table is a representation of sample data from a SIN system.

DAY OF WEEK	OPEN TIME	CLOSE TIME	UDA AREA	UDA AREA TYR	AFTER HR PER	SVG LE VCD	PRD TMP	FEE TYPE	AFTER HR FEE
1	64800	86400	58	ATY GROUP	7	ON	R	8	13
2	0	28800	59	ATY GROUP	7	ON	R	0	5
3	64800	86400	59	ATY GROUP	7	ON	I	8	10
4	0	28800	59	ATY GROUP	7	ON	I	0	5
5	72000	86400	5901	ATY BRANCH	7	ON	R	5	20
6	72000	86400	5901	ATY BRANCH	7	ON	R	0	10
7	72000	86400	5901	ATY BRANCH	7	ON	I	5	13
8	72000	86400	5902	ATY BRANCH	7	ON	I	0	10
9	0	86400	5902	ATY BRANCH	7	ON	R	5	0
10	0	86400	5902	ATY BRANCH	7	ON	R	0	0
11	0	86400	5902	ATY BRANCH	7	ON	I	5	0
12	0	86400	5902	ATY BRANCH	7	ON	I	0	0

### 3.4.4 Sub Functions Specifications

The ancillary charge internal sub functions utilize a common Input and Output structure to manage data internally. The input and output structures are defined below (these structures are identical to the fields and views that handle input and output for the tuxedo server and are the Pro\*C representation of those structures).

#### Input Structure (in\_anc\_chg):

Type	Name	Size
string	user_id	16
string	session_id	20
string	call_tree	150
string	function	16
long	process_mask	
string	view_version	100
string	co_svc_lvl_code	3
string	ci_svc_lvl_code	3
long	dvr_Age	
long	cntr_id	
string	stn_id	11
string	co_stn_cntry_code	3
string	co_stn_curr_code	4
string	co_stn_prd_typ	3
string	stn_area_list	100
string	vhcl_cat_cd	9
string	vhcl_cls_sfx	5
string	pick_up_date	13
string	return_date	13
long	rental_dur	
char	yng_dvr_Geo_Override	
string	fuel_Type	3
double	yng_dvr_amt	
char	yng_dvr_unit_typ	
long	nbr_adtl_dvrs	
double	adtl_dvr_amt	
char	adtl_dvr_unit_typ	
double	after_hrs_amt	
char	after_hrs_unit_typ	

## Output Structure (out anc chg):

Type	Name	Count	Size
long	error no	1	
long	num_charges	1	
long	chg_error_no	1-15	
string	chg_error_text	1-15	81
long	chg_sql_error_no	1-15	
string	chg_sql_error_text	1-15	81
long	charge_id	1-15	
string	charge_desc	1-15	36
double	charge_amt	1-15	
double	max_per_rental	1-15	
string	currency_code	1-15	4
string	rct_chg_typ	1-15	6
char	chg_unit_typ	1-15	
string	start_dt	1-15	13
string	end_dt	1-15	13
long	charge_dur	1-15	
long	fuel_error_no	1	
string	fuel_err_text	1	81
long	fuel_sql_error_no	1	
string	fuel_sql_error_text	1	81
long	num_fuel_prices	1	
string	fuel_pay_type	1-5	2
double	fuel_price	1-5	8

<b>System Name:</b>	Ancillary Charge Service			
<b>Module Name:</b>	ACE_Get_YD_Fee			
<b>Module Return Type:</b>	int			
<b>Module Language:</b>	ProC			
<b>Library Name:</b>				
<b>Brief Description:</b>	Function determines young driver fees for a rental transaction.			
<b>Number of Parameters:</b>	3			
<b>Input Parameters</b>	Description	Type	Required	Default
in_anc_chg	Ancillary Charge Input Parameters	struct*	Y	Input
out_anc_chg	Ancillary Charge Output Parameters	struct*	Y	Output
AreaHier	MKTC7500G_AreaHierarchy (UDA hierarchy)	struct*	Y	Input
<b>Input Requirements:</b>	As seen above			
<b>Output:</b>	The output of the ACE_Get_YD_Fee is the per day fee, max per rental amount, and any applicable error codes and messages.			
<b>Detailed Description:</b>	ACE_Get_YD_Fee determines the appropriate young driver fee for a given driver age, branch, vehicle class, vehicle class suffix, product type, and fee type.			

<b>System Name:</b>	Ancillary Charge Service
---------------------	--------------------------



<b>Module Name:</b>	ACE Get AD Fee			
<b>Module Return Type:</b>	int			
<b>Module Language:</b>	ProC			
<b>Library Name:</b>				
<b>Brief Description:</b>	Function determines additional driver fees for a rental transaction.			
<b>Number of Parameters:</b>	3			
<b>Input Parameters</b>	<b>Description</b>	<b>Type</b>	<b>Required</b>	<b>Default</b>
in_anc_chg	Ancillary Charge Input Parameters	struct*	Y	Input
out_anc_chg	Ancillary Charge Output Parameters	struct*	Y	Output
AreaHier	MKTC7500G_AreaHierarchy (UDA hierarchy)	struct*	Y	Input
<b>Input Requirements:</b>	As seen above.			
<b>Output:</b>	The output of the ACE_Get_AD_Fee is the per day fee, max per rental amount, and any applicable error codes and messages.			
<b>Detailed Description:</b>	ACE_Get_AD_Fee determines the appropriate additional driver fee and fee unit type for a given number of additional drivers, branch, product type, and fee type.			

<b>System Name:</b>	Ancillary Charge Service			
<b>Module Name:</b>	ACE_Get_AH_Fee			
<b>Module Return Type:</b>	int			
<b>Module Language:</b>	ProC			
<b>Library Name:</b>				
<b>Brief Description:</b>	Function determines the After hour fees for a rental transaction.			
<b>Number of Parameters:</b>	3			
<b>Input Parameters</b>	<b>Description</b>	<b>Type</b>	<b>Required</b>	<b>Default</b>
in_anc_chg	Ancillary Charge Input Parameters	struct*	Y	Input
out_anc_chg	Ancillary Charge Output Parameters	struct*	Y	Output
AreaHier	MKTC7500G_AreaHierarchy (UDA hierarchy)	struct*	Y	Input
<b>Input Requirements:</b>	As seen above			
<b>Output:</b>	The output of the ACE_Get_AH_Fee is the fee and the unit type of the fee along with any applicable error code/message.			
<b>Detailed Description:</b>	ACE_Get_AH_Fee determines the appropriate after hours fee when the after hours flag is "Yes."			

<b>System Name:</b>	Ancillary Charge Service			
<b>Module Name:</b>	ACE_Get_Fuel_Prcs			
<b>Module Return Type:</b>	int			

Module Language:	ProC			
Library Name:				
Brief Description:	Function determines fuel prices for a rental transaction.			
Number of Parameters:	3			
Input Parameters	Description	Type	Required	Default
in_anc_chg	Ancillary Charge Input Parameters	struct*	Y	Input
out_anc_chg	Ancillary Charge Output Parameters	struct*	Y	Output
AreaHier	MKTC7500G_AreaHierarchy (UDA hierarchy)	struct*	Y	Input
Input Requirements:	As seen above.			
Output:	The output of the ACE_Get_Fuel_Prcs are the fuel prices, fuel price types, and any applicable error codes and messages.			
Detailed Description:	ACE_Get_Fuel_Prcs determines the appropriate fuel prices and fuel price types for a given fuel type and branch.			

## 3.5 Calling Processes Variations

### 3.5.1 Reservations

The calling process during reservations will be required to estimate checkout date and rental duration.

### 3.5.2 Open Ticket

At Open Ticket, the checkout station and date are known, but the rental duration must be estimated.

### 3.5.3 Modify Ticket

The modify ticket call process may require a series of calls to the engine in order to determine young driver fees. Since young driver fees are partly based on vehicle class, it would be possible for the young driver fee to change as the result of a vehicle change. Additionally, a change in rental start date (between the time of the reservation and the actual rental) could potentially change young driver, additional driver, and after hours fees as well as fuel prices since all of these fees are subject to effective start and end dates.

### 3.5.4 Close Ticket

The close ticket process contains all of the information to accurately determine the actual ancillary charges. Data that was estimated in the Reservation or Open ticket processes, should be known in close ticket.

## 4 Assumptions and Issues

### 4.1 Assumptions

#	Initial Description	Notes	Status
1	Young driver fees are based on station age restrictions, vehicle category, product type, and contractual over-ride of station fees and or age restrictions	OK	Closed
2	Rental type used in young driver fees enable a station to have different fees for different types of rental transactions. Sample domain for rental type used in young driver fees are: Bodyshop Dealership Corporate Insurance Retail Government	OK	Closed
3	Contracts do not establish specific young driver fees. They only override the station fees.	OK	Closed
4	Stations maintain two levels of young driver fees for renters. A standard fee for underage renters without a contract, and a second fee for underage renters with a contract that has underage renter provisions. Furthermore, a contract can waive the underage fee altogether. The possible young driver fee situations for a retail rental would be:  A. If a young driver does not have a contract at all, then the renter is charged the station standard young driver rate  B. If a young driver has a contract that does not have a young driver provision, then the renter is charged the standard station rate.  C. If a young driver has a contract that does have a young driver provision, but does not waive the young driver fee, then the renter is charged the station's "contract" rate.  D. If a young driver has a contract that does have a young driver provision, and waives the young driver fee, then the renter is charged zero.  The following table summarizes the impact that contract indicators have on young driver fees:	Overall – OK.  <b>-Further Requirement:</b> 1. When the system fails to find data for a specific station, or condition, the default behavior will be to return zero fees or restrictions.  2. Need to anticipate that initially, most branches will not set up fee information.  3. The behavior of defaulting to zero fees or restrictions is true for all ancillary charges.  4. . The values for young renter fees are stored in the UDA hierarchy with the lowest level of the hierarchy taking precedence	Closed

	Situation	Contract data			Fee	
		Has Contract	Young driver provision?	Young driver Fee Waive	(based on station values)	
	w/o Contract	N			40	
	w/ Contract but does not have young driver provision	Y	N		40	
	w/ Contract w/ young driver provision but does not override the young driver fee	Y	Y	N	5	
	w/ Contract w/ young driver provision, waives the young driver fee	Y	Y	Y	0	
5	Young driver fees apply to the renter, not additional drivers.				<b>Actual requirement is:</b> 1. Young driver fees apply to the renter and additional drivers as needed. 2. In the case of additional drivers, multiple calls to determine the young driver fee will be required. 3. Multiple young driver fees could potentially be charged on a single rental given multiple young drivers.	Closed
6	Additional driver fees are based on values established by the UDA.				<b>Actual Requirement is:</b> 1. Additional driver fees are based on logic similar to young driver fees. 2. Additional driver fees will be determined by: - product type and - contractual over-ride or waiver of fees 3. The values for additional driver fees are stored in the UDA hierarchy with the lowest level of the hierarchy taking precedence.”	Closed
7	Ancillary charge data is maintained at the station level, the data is not maintained in the UDA hierarchy.				<b>Actual Requirement is:</b> 1. Ancillary charge data is maintained in the UDA hierarchy, with the data at the lowest level taking precedence.”	Closed
8	After hours fees are allocated based on the rental Check-Out time only.				<b>Actual Requirement is:</b> After hours fees are based on rental	Closed

		check out and/or check in time	
9.	ERAC will develop data maintenance forms for the ancillary charge tables		Closed
10	The STN_SCHS table does not contain Branch Opening /Closing times, but does contain start and stop times for when an After Hours Fee would be applied. There is no relational link that ties the Branch Opening/Closing times to the times contained in the STN_SCHS table.		Open
11	The Minimum Age Restrictions table contains age ranges where young driver fees are defined by UDA, vehicle class, vehicle class suffix, product type, and fee type. The lowest age listed in the table for a specific UDA, vehicle class, business type and fee type defines a "minimum age to rent". It is possible for a specific UDA to have multiple "minimum age to rent" values that vary by vehicle class, vehicle class suffix, product type or fee type. When a driver's age is below the minimum age for a given set of parameters, the service will return an error message. When the engine does not find any young driver data in the UDA hierarchy for the vehicle class, product type, and fee type combination, the engine will return a young driver fee of zero, and will include an error value that indicates no records were found. Furthermore, if all data matches except that the age is greater than any age range at the lowest UDA for which data exists then an appropriate "Old enough to rent without a fee" message and a fee of zero will be returned.	OK	Closed
12	Charge frequency for additional drivers and young renters will be either per day or per rental, depending on the values established by the UDA. The maintenance forms will ensure that a given record, the charge frequency will be either per day or per rental.	The actual requirement is to have a Per-Day charge frequency and implement a Maximum per rental value.	Closed

## 4.2 Issues

#	Description	Notes	Status
1	Is there a business requirement to calculate fees associated with after hour check out of vehicles?	Yes, need exists for European business.	Closed
2	If there is a business requirement to calculate after hour check out fees, what are the rules that apply to determine the fee?	Yes, still need to determine requirements. John E. and Jack to discuss current VRS functionality.	Closed
3	Is the 2 level young driver fee structure (station standard fee and station 'contract' fee) sufficient?	No, Need to utilize UDA hierarchy with the data at the lowest level of the hierarchy taking precedence..	Closed

4.	<p>The valid charge frequency for each of the ancillary charges needs to be defined. For example, (Per Rental, daily, weekly, monthly). The current values are listed in the following table:</p> <table><tr><th>Charge</th><th>Per Rental</th><th>Daily</th><th>Weekly</th><th>Monthly</th></tr><tr><td>Young Driver</td><td>Not Valid</td><td>Valid</td><td>Not Valid</td><td>Not Valid</td></tr><tr><td>Additional Driver</td><td>Valid</td><td>Valid</td><td>Not Valid</td><td>Not Valid</td></tr><tr><td>After Hours</td><td>Valid</td><td>Not Valid</td><td>Not Valid</td><td>Not Valid</td></tr></table>	Charge	Per Rental	Daily	Weekly	Monthly	Young Driver	Not Valid	Valid	Not Valid	Not Valid	Additional Driver	Valid	Valid	Not Valid	Not Valid	After Hours	Valid	Not Valid	Not Valid	Not Valid	<p>The actual requirement is to have a Per-Day charge frequency and implement a Maximum per rental value for Young Driver and Additional Drivers.</p>	Closed
Charge	Per Rental	Daily	Weekly	Monthly																			
Young Driver	Not Valid	Valid	Not Valid	Not Valid																			
Additional Driver	Valid	Valid	Not Valid	Not Valid																			
After Hours	Valid	Not Valid	Not Valid	Not Valid																			
5	<p>How do you handle if young renter fees of zero is returned for a non-young renter if there is no specific entry created in min0age-rtstrs for ages of 25 to 99. There are several options under consideration:</p> <p>1. Have data maintenance forms always create a row for every hierarchy level for ages 25 to 99 and fees of 0.</p> <p>2. Hard code theAPI to not return the fees of 0 for ages 25 to 99.</p> <p>3. Have the data maintenance insert entries at the highest possible level in the hierarchy of ages 25 – 99 with a fee of zero. So long as lower levels of the hierarchy do not override these entries, the syetem will return a fee of zero. The client will be able to drop the fee when calling the charge engine.</p> <p>4. If the system does find rows with a fee, return a fee of \$0, and an error code indicating that the driver's age was above the age ranges where a fee existed.</p>	<p>The actual requirement is that the data found at the lowest level of the UDA hierarchy will be assumed to be complete (i.e., containing data for all fees that need to be charged by that UDA). Hence, if no rows are found at that level of the UDA then an appropriate error message will be returned to the client (either “Too young to rent”, “No data found”, or “Old enough to rent without a fee”) in the output structure and the search will not continue up the UDA hierarchy to find a matching row.</p>	Closed																				
6.	<p>The requirement to support cases where branches can override any contractual young renter provisions(New York). A new input parameter will be added to the interface, enabling the calling application to specify if this branch desires to override any young renter contractual provisions.</p>	<p>The input parameter yng_dvr_Geo_Override will be used as a flag to signal the override of any contractual young driver provisions.</p>	Closed																				
7.	<p>If the calling process specifies a Young Driver Fee, or an Additional Driver fee, should the ancillary charge service attempt to apply a “Max Per Rental” optimization?</p>		Open																				
8.	<p>Need to determine how pre-purchased fuel prices will be maintained.</p>		Open																				
9.	<p>Fuel Prices will be maintained in VRS. There might be a requirement to have separate fuel cost for fleet rentals</p>		Open																				



ECARS V2.0  
Accurate Out the Door Pricing

Detailed Design Specification  
Products and Rates  
Iteration 3 - Final

**perotsystems™**

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## Gaps Addressed Summary

Gap ID	Functional Area	Brief Description
15	Rate Engine	Ability for Rate Engine to retrieve rates for ACAR .
19	Rate Engine	Ability for Rate Engine to retrieve products based on rate hierarchy (User defined area)
80	Rate Engine	Return rates for all vehicle car classes when specific vehicle car class is not requested.
86	Rate Engine	Service to retrieve the set of products for a specified product type and pick up location.
89	Rate Engine/Products	Return new attribute Primary Indicator.
91	Rate Engine/Rates	Ability to define and retrieve rates for vehicle car class code and class suffix code.
92	Products	Ability to specify the primary rate at a level of rate hierarchy by product type
97	Rates Engine/Products	Ability to specify one way charge without point to point data set up.

## Document Control

### Primary Document Owner/Domain

Issued by: (PSC)

Name	Position/Department	Signature	Date
Nitin Palsule (Products and Rates – Data)	Development Lead		9/10/01

### Customer Approval

Authorized by: (ERAC)

Name	Position/Department	Signature	Date

## Document History

Version	Date	Author	Reason for Change
1.0	05/21/01	Sunil Patel	Initial draft of Design Document
1.1	05/22/01	Sunil Patel	Internal review updates
1.2	08/2001	Sunil Patel, Bob Nunn, Stacy Moore	Addendum changes merged.
2.0	08/27/01	Sunil Patel & Bob Nunn	Initial draft for Iteration 3
2.1	09/10/01	Sunil Patel & Bob Nunn	<p>Added section 3.1.3 - Special Products Implementation and have re-worked sections 2.1.1 and 2.1.2 and added new scenarios for Iteration 3. Also edited the following sections::</p> <p>3.1.1.1 - APSInputs 3.1.1.3 – Detailed process Flow 3.1.2.1 – PRSInputs 3.1.2.2 - PRSOutputs 3.1.2.3 – Detailed process Flow</p> <p>Deleted UDA Hierarchy section – Section has been transferred to the Data Conversion Detail Design document.</p>

# 1 Introduction

## 1.1 Overview

The purpose of this document is to provide detailed design specifications for product and rates related data set up and associated Main Rate Engine component of VRS pricing engine. The scope of this document is to address all the gaps for these components that are part of iteration 2 as defined in 'Gaps Addressed Section' of this document. In VRS the rental product has a set of basic attributes, reservation applicability and set of basic rental charges based on the pickup location and/or rate hierarchy. In addition, the VRS products are classified into three different levels of hierarchy mainly for reporting purposes. VRS Main rate engine accepts a set of predefined inputs for the rental transaction and suggests the most appropriate rental product along with the rental charges for the specific transaction. Section 2 describes the detailed design for all the data set up requirements for products and rates. Section 3 describes the process flow and API specification for main rate engine.

## 1.2 Dependencies

Dependencies with ERAC's Test windows etc.

## 1.3 Data Conversion

High level impacts to Data Conversion. A separate document will be published for data conversion design.

## 1.4 Impact Analysis

### 1.4.1 Products

The Products area primary impact is the Rate Engine. Any changes and updates to the products directly impact the Rate Engine and indirectly impact the other VRS functional areas.

### 1.4.2 Rate Engine

The Rate Engine accepts input from the user interface. These inputs along with the product information stored in database tables is used by the Rate Engine to identify and return the suggested rate and product for a given rental transaction. Therefore, the main rate engine impacts are the user interfaces and the product tables.

## 2 Design Specifications – Data Components

### 2.1 Products / Rates Data Set-up

#### 2.1.1 Products - Data Set-up

The following sections will depict the data set-up process for the ERAC products

##### 2.1.1.1 Use Case: User Creates Product Type

Product type is at the highest level of the VRS product hierarchy. Product type is used to describe the general line of business that the product instances defined beneath it are associated with. There are no pre-defined product types within the VRS system. Product types are created by the business users based on business requirements. There is no limit to the number of product types that can be defined. The PROD\_TYPS table stores all valid product types defined within the VRS system.

Coverages, rates, and messages can be defined and priced by product type. One option for retrieving rates in the VRS system will be to request rates based on product type. A valid product type can be passed to the VRS rates engine in the rate source field. All applicable products matching the input product type at the lowest level of the location hierarchy will be returned to the caller.

**Goal In Context:**

One product type will need to be created for each line of business having it's own set of products and rates. When a product type is created, the appropriate data will be added to the PROD\_TYPS table.

**Scope:**

This Use Case deals with Create and Update activities on the VRS product types table (PROD\_TYPS).

**Level:****Pre-Condition:**

None

**Success End Condition:**

Product type created

**Failed End Condition:**

Product type not created successfully

**Primary Actor:**

User responsible for maintaining product type data (Super User).

**Trigger Event:**

New product type is created.

## 2.1.1.1.1 Main Success Scenarios

There are four steps to creating a product type.

**Step 1: User specifies a new product type code.**

This code can be up to two characters in length. It must not already exist on the product types table.

**Step 2: User provides a description of the new product type.**

The description can be up to 35 characters in length.

**Step 3: User provides billing cycle indicator.**

The billing cycle indicator is a one character value. It specifies whether the associated rates are billed out as a calendar day or a twenty four hour day. Valid values are "C" (Calendar Day) and "T" (Twenty four hour day).

**Step 4: User saves record.**

The row is created in the product types (PROD\_TYPS) table. The primary key for this record is the product type code (PROD\_TYP\_CD).

Column Description	Column Name	Data Type
<b>#Product Type Code</b>	PROD_TYP_CD	Varchar2(2)
<b>Product Type Description</b>	PROD_TYP_DESC	Varchar2(35)
<b>Billing Cycle:</b>	BILL_CYC_CDE	Varchar2(1)

\*Bolded fields represent mandatory attributes for Product Types entity.

## 2.1.1.1.1.1 Scenario 1 - User Creates New Product Type

The following data is provided by a user to create a product type:

Product Type Code: **R**  
Product Type Description: **Standard Retail Rates**  
Billing Cycle: **<H>** Twenty four hour day

The following record will be added to the product types table (PROD\_TYPS):

Product Type Code	Product Type Description	Billing Cycle
I	Standard Insurance Rates	C
B	Standard Body Shop Rates	H
D	Standard Dealership Rates	H
<b>R</b>	<b>Standard Retail Rates</b>	<b>H</b>
S	Special Rates	H

\* **Bolded** row indicates new entry added for this scenario

#### 2.1.1.1.2 Scenario Variations

##### 2.1.1.1.2.1 User Updates Product Type

The only information that can be updated for an existing product type is the product type description. No other updates may be made to the record. In order to update the product type description, the user overtypes the existing text

##### 2.1.1.1.2.2 User Deletes a Product Type

A user can delete the product type if there are no product families defined for it.

*Create/Update/Delete access will be available to super user only.*

#### 2.1.1.1.3 Related Information

#### 2.1.1.1.4 References/Appendix -A

### 2.1.1.2 Use Case: User Creates Product Family

Product family is at the second level of the VRS product hierarchy. Product family is used to create sub categories of product types. There are no pre-defined product families within the VRS system. Product families are created by the business users based on business requirements. There is no limit to the number of product families that can be defined.

Every product family is associated to one and only one product type. A product type will have zero or more product families associated with it..

**Goal In Context:**

In order to offer rates for a product of a given product type, a minimum of one product family will be created for each product type. Additional product families can be created as business needs dictate. When a product family is created, the appropriate data will be added to the VRS PRODS table.

**Scope:**

This Use Case deals with Create and Update activities on the VRS product families table. (PRODS).

**Level:****Pre-Condition:**

Product types table populated.

**Success End Condition:**

Product family created.

**Failed End Condition:**

Product family not created successfully

**Primary Actor:**

User responsible for maintaining product family data (Super User).

**Trigger Event:**

New product family is created.

#### 2.1.1.2.1 Main Success Scenarios

There are four steps to creating a product family.

**Step 1: User specifies the product type that the new product family will be associated with.**  
The product type specified must already exist in the product types (PROD\_TYPS) table.

**Step 2: User specifies a new product family code.**  
This code can be up to four characters in length. It must not already exist on the product families table. If the product family code entered already exists, an error message is displayed and no data creation occurs.

**Step 3: User provides a description of the new product family.**  
The description can be up to 35 characters in length.

**Step 4: User saves record.**

The row is created in the product families (PRODS) table. The primary key for this record is the product family code (PROD\_ID).



Column Description	Column Name	Data Type
<b>#Product Family Code</b>	PROD_ID	Varchar2(4)
<b>Product Family Description</b>	PROD_DESC	Varchar2(35)
<b>Product Type Code</b>	PRT_PROD_TYP_CD	Varchar2(2)

\*Bolded fields represent mandatory attributes for Product Families entity.

#### 2.1.1.2.1.1 Scenario 1: User creates new Retail product family

The following data is provided by a user to create a product family:

Product Family Code: **RUNL**  
Product Family Description: **Standard Retail Unlimited Mileage**  
Product Type Code: **R**

The following record will be added to the product families table (PRODS):

Product Family Code	Product Family Description	Product Type Code
RLMM	Retail Limited Medium Free Miles	R
<b>RUNL</b>	<b>Standard Retail Unlimited Mileage</b>	<b>R</b>

*Primary key of 4 characters [A-Z] No special characters are allowed.*

*Product type must exist in PROD\_TYPS table.*

*Bolded row depicts data added for this scenario*

#### 2.1.1.2.1.2 Scenario 2: User creates new Special product family

The following data is provided by a user to create a product family:

Product Family Code: **WSRT**  
Product Family Description: **Weekend Special**  
Product Type Code: **S**

The following record will be added to the product families table (PRODS):

Product Family Code	Product Family Description	Product Type Code
RLMM	Retail Limited Medium Free Miles	R
RUNL	Standard Retail Unlimited Mileage	R
<b>WSRT</b>	<b>Weekend Special</b>	<b>S</b>

*\* Bolded row depicts data added for this scenario*

2.1.1.2.1.3 Scenario 3: User creates new Retail product family for Bid Pricing

The following data is provided by a user to create a product family:

Product Family Code: **BIDR**  
Product Family Description: **Bid Price Retail Rates**  
Product Type Code: **R**

The following record will be added to the product families table (PRODS):

Product Family Code	Product Family Description	Product Type Code
RLMM	Retail Limited Medium Free Miles	R
RUNL	Standard Retail Unlimited Mileage	R
WSRT	Weekend Special	S
<b>BIDR</b>	<b>Bid Price Retail Rates</b>	<b>R</b>

*\* Bolded row depicts data added for this scenario*

2.1.1.2.2 **Scenario Extensions**2.1.1.2.3 **Scenario Variations**2.1.1.2.3.1 User Updates Product Family

The only information that can be updated for an existing product family is the product family description. No other updates may be made to the record. In order to update the product family description, the user overtypes the existing text

2.1.1.2.3.2 User Deletes a Product Family

A user can delete a product family as long as there are no product instances created for this family.

*Create/Update/Delete access on this entity is restricted to Super Users only.*

2.1.1.2.4 **Related Information**2.1.1.2.5 **References**

### 2.1.1.3 Use Case: User Creates Product Instance

Product instance is at the third level of the VRS product hierarchy. The VRS product instance is used to identify a product offering and will be used by the VRS rates header to offer rates at a specific location in the Enterprise location hierarchy. There are no pre-defined product instances within the VRS system. Product instances are created by the business users based on business requirements.

Every product instance is associated to one and only one product family. A product family will have zero or more product instances associated with it. There is no practical limit on the number of product instances that can be associated to a given product family.

Product instance allows the user to define certain basic attributes for the product like product name, description, country of ownership, etc. Various set of rates are defined for the product instance based on the Pick Location (In VRS this is represented by an entity called RATES\_HEADER). The common attributes for the product like reservation applicability are defined for a specific product instance instead of repeating it for each of the RATES\_HEADER record for that product.

<b>Goal In Context:</b>	When a product instance is created, the appropriate data will be added to the PROD_INSTS table.
<b>Scope:</b>	This Use Case deals with Create and Update activities on the VRS product instance table. (PROD_INSTS).
<b>Level:</b>	
<b>Pre-Condition:</b>	Product types and product family tables populated.
<b>Success End Condition:</b>	Product instance created.
<b>Failed End Condition:</b>	Product instance not created successfully
<b>Primary Actor:</b>	User responsible for maintaining product instance data (Super User).
<b>Trigger Event:</b>	New product instance is created.

#### 2.1.1.3.1 Main Success Scenarios

There are five steps to creating a product instance.

**Step 1: User specifies the product family that the new product instance will be associated with.**  
The product family specified must already exist in the product families table (PRODS).

**Step 2: User specifies a new product instance code.**  
This code can be up to eight characters in length. It must not already exist on the product instance table.

**Step 3: User provides a description of the new product instance.**  
The description can be up to 35 characters in length.

**Step 4: User provides owning country of the new product instance.**  
Must be a valid country code.

**Step 5: User saves record.**  
Data maintenance process populates creation user id and creation date/time. The row is created in the product instance (PROD\_INSTS) table. The primary key for this record is the product instance code (PROD\_INST\_CD).

Column Description	Column Name	Data Type
#Product Instance Code	PROD_INSTS_CD	Varchar2(8)
Product Instance Description	PROD_INSTS_DESC	Varchar2(35)
Product Family Code	PRD_PROD_ID	Varchar2(4)
Country Code	CRY_ARIMP_CRY_CD	Varchar2(2)
Creation Operator ID	CREATE_USER_ID	Varchar2(30)
Creation Date	CREATE_DT	Date

\*Bolded fields represent mandatory attributes for Product Instance entity.

#### 2.1.1.3.1.1 Scenario 1: User creates new Retail product instance

The following data is provided by a user to create a product instance:

Product Instance Code: **LIMMED**  
Product Family Code: **RLMM**  
Product Instance Description: **Local Market Medium Free Daily Miles**  
Country: **US**

The following record represents a row in the product instance table (PROD\_INSTS). The tax, surcharge, and fuel inclusive flags have been defaulted to N as there has been no requirement identified for bundling of these items in iteration 3:

Product Code	Product Instance Description	Product Family Code	Country	Create Date
UNLIMITD	Local Market Unlimited Mileage	RUNL	US	20-MAY-2001 11:12:13
<b>LIMMED</b>	<b>Local Market Medium Free Daily Miles</b>	<b>RLMM</b>	<b>US</b>	<b>20-MAY-2001 13:14:16</b>

Create Operator	Tax Included	Surcharge Included	Fuel Included
NCC1701	N	N	N
<b>KAA8207</b>	<b>N</b>	<b>N</b>	<b>N</b>

\* Bolded row indicates new data added for this entry

#### 2.1.1.3.1.2 Scenario 2: User creates new Special product instance

The following data is provided by a user to create a product instance:

Product Instance Code: **WSLMRT**  
Product Family Code: **WSRT**  
Product Family Description: **Weekend Special Local Market**  
Country: **US**

The following record represents a row in the product instance table (PROD\_INSTS). The tax, surcharge, and fuel inclusive flags have been defaulted to N as there has been no requirement identified for bundling of these items in iteration 3:

Product Code	Product Instance Description	Product Family Code	Country	Create Date
UNLIMITD	Local Market Unlimited Mileage	RUNL	US	20-MAY-2001 11:12:13
LIMMED	Local Market Medium Free Daily Miles	RLMM	US	20-MAY-2001 13:14:16
<b>WSLMRT</b>	<b>Weekend Special Local Market</b>	<b>WSRT</b>	<b>US</b>	<b>20-MAY-2001 18:21:43</b>

Create Operator	Tax Included	Surcharge Included	Fuel Included
NCC1701	N	N	N
KAA8207	N	N	N
<b>HAL2001</b>	<b>N</b>	<b>N</b>	<b>N</b>

\* Bolded row indicates new data added for this entry

#### 2.1.1.3.1.3 Scenario 3: User creates new Retail product instance for Bid Pricing

The following data is provided by a user to create a product instance:

Product Instance Code: **BIDRTL**  
Product Family Code: **BIDR**  
Product Family Description: **Bid Price Retail Product**  
Country: **US**

The following record represents a row in the product instance table (PROD\_INSTS). The tax, surcharge, and fuel inclusive flags have been defaulted to N as there has been no requirement identified for bundling of these items in iteration 3:

Product Code	Product Instance Description	Product Family Code	Country	Create Date
UNLIMITD	Local Market Unlimited Mileage	RUNL	US	20-MAY-2001 11:12:13
LIMMED	Local Market Medium Free Daily Miles	RLMM	US	20-MAY-2001 13:14:16
WSLMRT	Weekend Special Local Market	WSRT	US	20-MAY-2001 18:21:43
<b>BIDRTL</b>	<b>Bid Price Retail Product</b>	<b>BIDR</b>	<b>US</b>	<b>20-MAY-2001 18:46:21</b>

Create Operator	Tax Included	Surcharge Included	Fuel Included
NCC1701	N	N	N
KAA8207	N	N	N
HAL2001	N	N	N
<b>NCC1701</b>	<b>N</b>	<b>N</b>	<b>N</b>

\* Bolded row indicates new data added for this entry

**2.1.1.3.2 Scenario Extensions****2.1.1.3.3 Scenario Variations****2.1.1.3.3.1 User Updates Product Instance**

The only information that can be updated for an existing product instance is the product instance description. No other updates may be made to the record. In order to update the product instance description, the user overtypes the existing text

*Create/Update access on this entity is restricted to Super Users only.*

**2.1.1.3.3.2 User Deletes a Product Instance**

A user does not have the ability to physically delete an existing product instance.

**2.1.1.3.4 Related Information****2.1.1.3.5 References/Appendix –A**

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#### 2.1.1.4 Use Case: User Creates Rate Qualification Record

VRS rate qualifications describe what conditions need to be met in order to qualify for a product at a particular location. These conditions include:

- The “base” duration of the rental (daily, weekend).
- Minimum length of rental.
- Maximum length of rental.
- Earliest checkout day and time.
- Latest checkout day of week and time.
- Latest check in day of week and time.
- Days of week the rental period must include.
- Days of week the rental period must not include.
- Required overnight keep, by day of week.
- Minimum charge days, by day of week.
- Advanced booking rules.
- Pre-payment rules.

Base duration of the rental, minimum length of rental, maximum length of rental, and qual description are the only components of the rate qualification that must be specified. All other fields are optional. Every product that is available for sale in VRS must have a rate qualification attached. Rate qualifications are set up once, and then potentially used many times and by many different products. Rate qualification rules will be enforced by the system at reservation time. Rate qualification rules may be overridden by the counter agent at open ticket time.

Standard SI retail products will require one rate qualification record. The weekend special product will require it's own rate qualification record. How a rate qualification record is associated to a product and location will be discussed in a future use case.

<b>Goal In Context:</b>	Create the rate qualification record for a standard SI retail product. <u>Create a rate qualification record for a weekend special product.</u> When the task is complete, the appropriate data will be added to the RNT_DRTN_BNDS table.
<b>Scope:</b>	This Use Case deals with Create activity on the VRS rate qualifications table (RNT_DRTN_BNDS).
<b>Level:</b>	
<b>Pre-Condition:</b>	None
<b>Success End Condition:</b>	Rate qualification record created.
<b>Failed End Condition:</b>	Rate qualification record not created successfully
<b>Primary Actor:</b>	User responsible for maintaining rate qualification data.
<b>Trigger Event:</b>	New rate qual is created.

##### 2.1.1.4.1 Main Success Scenarios

There can be up to ten steps to creating a VRS rate qual for use with standard retail or weekend products.

###### Step 1: User specifies rate base unit code

User specifies the appropriate rate base unit code for the qual. This rate base unit code must be compatible with the product it will be associated with. SI retail and special products will use “D” (Daily).

**Step 2: User specifies qual description**

User enters a description of the qual. This description can be up to 35 characters in length.

**Step 3: User specifies minimum rental length and minimum rental length unit code**

User specifies minimum rental length and the unit that the minimum rental length is expressed in (i.e. <D>ays). Minimum rental length unit code of "D" (Days) will be used for SI retail. Minimum rental length of zero will be used for most SI retail.

**Step 4: User specifies maximum rental length and maximum rental length unit code**

User specifies maximum rental length and the unit that the maximum rental length is expressed in (i.e. <D>ays). Maximum rental length unit code of "D" (Days) will be used for SI retail. Maximum rental length of 30 will be used for most SI retail.

**Step 5: User specifies earliest pick up day of week and time**

User selects first day of week that vehicle may be picked up (i.e. Thurs) from pick list. User specifies earliest time (in hh:mi format) that vehicle may be picked up on the day of week specified in first pickup day field (i.e. 12:00 for noon pickup). Day of week will be stored as an integer value (1 – 7) following Oracle date standards. Day of week will be represented on the screen to the user in a meaningful way. This field is generally used only on quals to be associated with weekend special type products.

**Step 6: User specifies latest pick up day of week and time**

User selects last day of week that vehicle may be picked up (i.e. Sun) from pick list. User specifies latest time (in hh:mi format) that vehicle may be picked up on the day of week specified in latest pickup day field (i.e. 12:00 for noon pickup). Day of week will be stored as an integer value (1 – 7) following Oracle date standards. Day of week will be represented on the screen to the user in a meaningful way. This field is generally used only on quals to be associated with weekend special type products.

**Step 7: User specifies latest return day of week**

User selects last day of week that vehicle may be returned and still qualify for special rate. (i.e. Mon) from pick list. The return time is implicitly defaulted to the time that the vehicle was initially picked up. Day of week will be stored as an integer value (1 – 7) following Oracle date standards. Day of week will be represented on the screen to the user in a meaningful way. This field is generally used only on quals to be associated with weekend special type products.

**Step 8: User saves record.****Step 9: System retrieves rate qual sequence number**

Data name on data record for sequence number is drtn\_bnd\_cd

**Step 10: System saves new qual record**

The input record is written to the RNT\_DRTN\_BNDS table. The primary key for this record is the sequence number drtn\_bnd\_cd.

Column Description	Column Name	Data Type	Remarks
Rate Qual Sequence Number	Drtn_bnd_cd	Number(6)	Generated Sequence number
Rate Base Unit Code	Chg_unit_cd	Varchar2(1)	Current valid values: <D>Daily Possible Future values: <W> Weekly <M> Monthly
Rate Qual Description	Drtn_bnd_desc	Varchar2(35)	
Minimum Rental Length	Min_rnt_drtn	Number(4)	
Minimum Rental Length Duration Code	Min_rntn_drtn_cd	Varchar2(1)	Current valid values: <D>Days <H> Hours
Maximum Rental Length	Max_rnt_drtn	Number(4)	



Maximum Rental Length Duration Code	Max_rntn_drtn_cd	Varchar2(1)	Current valid values: <D>Days <H> Hours
Rental Start Day	Co_strt_day	Number(1)	
Rental Start Time	Co_from	Number(5)	
Rental Latest Day	Co_end_day	Number(1)	
Rental Latest Time	Co_upto	Number(5)	
Return Latest Day of Week	Ci_day_of_wk	Number(1)	

2.1.1.4.1.1 Scenario 1: User creates new rate qualification record for SI retail

The following data is provided by a user to create the SI retail rate qual:

Rate Base Unit Code: **D**  
 Rate Qual Description: **Daily Rental, Maximum 30 Days**  
 Minimum Rental Length: **Zero days**  
 Maximum Rental Length: **Thirty Days**

The following record represents a row in the rate qual table (RNT\_DRTN\_BND\_CD):

Rate Qual Seq Number	Rate Base Unit Code	Qual Description	Min Rental Length	Min Rental Length Unit	Max Rental Length	Max Rental Length Unit
000001	D	Daily Rental, Maximum 30 Days	0	D	30	D

2.1.1.4.1.2 Scenario 2: User creates new rate qualification record for Weekend Specials

The following data is provided by a user to create the SI weekend special rate qual:

Rate Base Unit Code: **D**  
 Rate Qual Description: **Weekend Special Noon Thurs Pickup**  
 Minimum Rental Length: **Zero days**  
 Maximum Rental Length: **Thirty Days**  
 Rental Earliest: **Noon on Thursday**  
 Rental Latest: **Noon on Sunday**  
 Return Latest: **Monday**

Rate Qual Sequence Number	Rate Base Unit Code	Qual Description	Minimum Rental Length	Minimum Rental Length Unit	Maximum Rental Length	Maximum Rental Length Unit
000001	D	Daily Rental, No Restrictions	0	D	30	D
000002	D	Weekend Special Noon Thurs Pickup	0	D	30	D

Rental Earliest Day	Rental Earliest Time	Rental Latest Day	Rental Latest Time	Return Latest Day
<b>Thurs</b>	<b>12:00</b>	<b>Sun</b>	<b>12:00</b>	<b>Mon</b>

\* **Bolded** row indicates new table entry for this scenario

**2.1.1.4.2 Scenario Extensions****2.1.1.4.3 Scenario Variations****2.1.1.4.3.1 User Updates the Rate Qual Record**

No information on the rate qual record can be updated. A different rate qual can be associated with a rate header if business conditions warrant.

**2.1.1.4.3.2 User Deletes a Rate Qual**

A user does not have the ability to physically delete an existing rate qual record.

**2.1.1.4.4 Related Information**

#### 2.1.1.4.5 References – NatRes Pick Up Return Rules and the VRS Rate Qual

The examples below reconcile the pick up and return rules available within the Enterprise NatRes system and the corresponding equivalent VRS function. There are a few differences between the between the NatRes pick up and return rules and the VRS equivalent. These differences are highlighted below.

1. NatRes pick up and return rules are attached at the car class level. The VRS rate qual applies to all car classes set up for a given product and location (rate header). Enterprise has agreed that rate quals do not need to be attached at the car class level.
2. NatRes pick up and return rules are explicitly attached at the charge unit level (daily, weekly, monthly, weekend). VRS handles the length of a rental week implicitly by extending the lower of the weekly rate or sum of daily charges for every period of the rental up to 7 days. The length of a rental month in VRS is expressed at the car class level and is specified in the same place the monthly rate is defined. Similar to weekly rate processing, the VRS rates optimizer begins extending the monthly rate when the sum of daily and/or weekly charges is greater than the monthly rate.
3. NatRes can extend weekend rates for it's standard retail (Non UM) rate category. VRS uses a separate weekend product and rate qual.

2.1.1.4.5.1 ERAC/VRS Comparison 1 – Weekend Special, Thursday through Sunday Pick Up

Rule Type	Rule Code	Record Sequence	Pick Up Day	Min Days	Max Days	Max Rental Days
PKRT	P01000	1	SUN	1	1	
PKRT	P01000	2	MON	0	0	
PKRT	P01000	3	TUE	0	0	
PKRT	P01000	4	WED	0	0	
PKRT	P01000	5	THU	1	4	
PKRT	P01000	6	FRI	1	3	
PKRT	P01000	7	SAT	1	2	

Rate Base Unit Code	Qual Description	Min Rental Length	Min Rental Unit	Max Rental Length	Max Rental Unit	Rental Earliest Day	Rental Earliest Time	Rental Latest Day	Rental Latest Time	Return Latest Day	Minimum Charge By Day of Week S M T W R F S
D	Weekend Special Noon Thurs Pickup	1	D	30	D	Thurs	00:00	Sun	23:59	Mon	1 0 0 0 1 1 1

The pickup/return rules shown above were replicated from production ERAC data. The seven pickup/return rules and the one VRS rate qual shown above accomplish the same thing. **Note that the business function provided by the NatRes Max Days parameter is implemented in the VRS rate qual using the Return Latest Day of Week.**

- Earliest pick up day of week is Thursday
- Last pick up day of week is Sunday
- Vehicle is due back no later than Monday
- Maximum charge on weekend rate depends on the day of week the vehicle was picked up

2.1.1.4.5.2 ERAC/VRS Comparison 2 – Weekend Special, Friday Only Pick Up

Rule Type	Rule Code	Record Sequence	Pick Up Day	Min Days	Max Days	Max Rental Days
PKRT	P01001	1	SUN	0	0	
PKRT	P01001	2	MON	0	0	
PKRT	P01001	3	TUE	0	0	
PKRT	P01001	4	WED	0	0	
PKRT	P01001	5	THU	0	0	
PKRT	P01001	6	FRI	3	3	
PKRT	P01001	7	SAT	0	0	

Rate Base Unit Code	Qual Description	Min Rental Length	Min Rental Unit	Max Rental Length	Max Rental Unit	Rental Earliest Day	Rental Earliest Time	Rental Latest Day	Rental Latest Time	Return Latest Day	Minimum Charge By Day of Week S M T W T F S
D	Weekend Special Friday Only Pick Up	3	D	30	D	Fri	00:00	Fri	23:59	Mon	0 0 0 0 0 3 0

The pickup/return rules shown above were replicated from production ERAC data. The seven pickup/return rules and the one VRS rate qual shown above accomplish the same thing. Note that the business function provided by the NatRes Max Days parameter is implemented in the VRS rate qual using the Return Latest Day of Week.

- Earliest pick up day of week is Friday
- Last pick up day of week is Friday
- Vehicle is due back no later than Monday
- Minimum rental length is 3 days
- Minimum charge is 3 days

## 2.1.1.4.5.3 ERAC/VRS Comparison 3 – Weekend Special, Thursday and Friday Only Pick Up

Rule Type	Rule Code	Record Sequence	Pick Up Day	Min Days	Max Days	Max Rental Days
PKRT	P01002	1	SUN	0	0	
PKRT	P01002	2	MON	0	0	
PKRT	P01002	3	TUE	0	0	
PKRT	P01002	4	WED	0	0	
PKRT	P01002	5	THU	3	4	
PKRT	P01002	6	FRI	3	3	
PKRT	P01002	7	SAT	0	0	

Rate Base Unit Code	Qual Description	Min Rental Length	Min Rental Unit	Max Rental Length	Max Rental Unit	Rental Earliest Day	Rental Earliest Time	Rental Latest Day	Rental Latest Time	Return Latest Day	Minimum Charge By Day of Week S M T W R F S
D	Weekend Special Thurs, Fri Only Pick Up	3	D	30	D	Thu	00:00	Fri	23:59	Mon	0 0 0 0 3 3 0

The pickup/return rules shown above were replicated from production ERAC data. The seven pickup/return rules and the one VRS rate qual shown above accomplish the same thing. **Note that the business function provided by the NatRes Max Days parameter is implemented in the VRS rate qual using the**

**Return Latest Day of Week.**

- Earliest pick up day of week is Thursday
- Last pick up day of week is Friday
- Vehicle is due back no later than Monday
- Minimum length of rental is 30 days
- Minimum charge is 3 days

#### 2.1.1.4.5.4 ERAC/VRS Comparison 4 – Weekly Rate

Rule Type	Rule Code	Record Sequence	Pick Up Day	Min Days	Max Days	Max Rental Days
PKRT	P01006	1	SUN	4	7	
PKRT	P01006	2	MON	4	7	
PKRT	P01006	3	TUE	4	7	
PKRT	P01006	4	WED	4	7	
PKRT	P01006	5	THU	4	7	
PKRT	P01006	6	FRI	4	7	
PKRT	P01006	7	SAT	4	7	

The pickup/return rules shown above were replicated from production ERAC data. The seven pickup/return rules and the VRS rates optimizer accomplish essentially the same thing.

VRS does not physically store the length of a rental week. The VRS rates optimizer will utilize the weekly rate when the sum of daily charges during any period up to 7 days exceeds the weekly rate. The daily rate will be utilized again once the number of days in the rental period exceeds some multiple of 7 days.



## 2.1.1.4.5.5 ERAC/VRS Comparison 5 – Monthly Rate

Rule Type	Rule Code	Record Sequence	Pick Up Day	Min Days	Max Days	Max Rental Days
PKRT	P01007	1	SUN	28	30	
PKRT	P01007	2	MON	28	30	
PKRT	P01007	3	TUE	28	30	
PKRT	P01007	4	WED	28	30	
PKRT	P01007	5	THU	28	30	
PKRT	P01007	6	FRI	28	30	
PKRT	P01007	7	SAT	28	30	

The pickup/return rules shown above were replicated from production ERAC data. The seven pickup/return rules and the Month Factor field on the RateDetails row accomplish essentially the same thing.

The length of a rental month in VRS is determined by the Month Factor setting on the Rate\_Details table. The VRS rates optimizer will utilize the monthly rate when the sum of some combination of daily and weekly charges exceeds the monthly rate. The daily rate will be utilized again once the number of days in the rental period exceeds the value in Month Factor.

## 2.1.2 Rates - Data Set-up

### 2.1.2.1 Use Case: User Creates Rates Header

The VRS rate header is used to make a given product instance available for rental at a specific location in the Enterprise rate hierarchy. Many rate headers can be defined for a product instance, depending on the number of locations that a given product is to be offered.

Several types of information are stored on the rate header. The rate header contains the product name, the location the product is being offered, and a location specific description of the product offering. Effective start and end dates define when the product is available for reservation. A discount flag allows the user to specify whether discounts can be applied to the rates for this rate header. The rate base unit indicator is used to specify the types of rates that will be associated with the rate header.

The remaining field open for user input is the primary rate indicator. If two or more retail products extend rates at the same location, one of the products must be flagged as primary. The product flagged as primary will be the first returned by the VRS rates engine when two or more products are applicable in a given rental situation. Only one product of a given product type can be flagged as primary at a single location (i.e. if two retail products are available at a given location, only one can be flagged as primary). There must be one and only one rate flagged as primary for a given product type and location.

A number of fields stored on the rate header are denormalized from the associated product instance or product type tables. These data elements will be identified later in this document.

Actual rate amounts, mileage limits, mileage charges, and qualification pickup rules are stored in separate tables that are related to the rate header. Date and vehicle category specific rate and mileage charges are stored in the VRS rate detail table (RATE\_DETAILS). Qualifications and pick up rules are housed in the rate qualifications table (RNT\_DRTN\_BNDS). These will each be discussed in detail in separate use cases.

The rate header is created once when a product is first made available at a hierarchy location. Under most circumstances, once the rate header is created, it requires no further maintenance.

<b>Goal In Context:</b>	ERAC user creates a rate header. Rate header and underlying rate detail usage and rate header qual association records populated with appropriate data and new data records stored in VRS database.
<b>Scope:</b>	This Use Case deals with the Create and Update activities on the VRS rates header table. (RATES_HEADER).
<b>Level:</b>	
<b>Pre-Condition:</b>	Product types, product family, product instance, and product availability tables populated. Appropriate user defined areas created.
<b>Success End Condition:</b>	Rates header created. Rate detail usage and rate header qual association created behind the scenes.
<b>Failed End Condition:</b>	Rates header not created successfully. Rate detail usage and rate header qual association consequently not created.
<b>Primary Actor:</b>	User responsible for maintaining rates header data.
<b>Trigger Event:</b>	New rates header is created.

#### 2.1.2.1.1 Main Success Scenarios

##### Scenario 1: User creates new rates header

There following steps detail the process of creating a rates header.

###### Step 1: User selects the appropriate product

The product code may be entered directly or selected from a pick list. This pick list may be optionally scoped by product type (i.e. <R>etail) and product family (i.e. <RLMM> Retail Limited Medium Free Miles) and include the description of the product. The data maintenance process will verify that a valid product is entered upon leaving this field.

###### Step 2: User specifies the location that the product is to be offered

The location can be entered directly or selected from a pick list. Location will be in the form of a user defined area name and UDA type (i.e. UDA name might be 01 and UDA type might be ATY\_GROUP). This combination of UDA name and type will equate to a specific location in the Enterprise rate hierarchy.

###### Step 3: User specifies the dates that the product will be available for reservation at the location

User inputs effective start and end dates for the rate header (i.e. current date – ongoing). These dates represent the first and last dates that reservations will be accepted for the product/location. The data maintenance process will verify that input start date is not in the past and that input effective end date is greater than input effective start date. Date will include the time in hours (24 hour format), minutes, and seconds. The time portion of the effective start and end dates are set as follows:

**Effective Start Time:** If the input effective start date is equal to the current date, the time portion is set to current time. If the effective start date is in the future, the time portion is set to 00:00:00.

**Effective End Time:** Set to 23:59:59

###### Step 4: User provides a location specific description of the product offering

The description can be up to 60 characters in length.

###### Step 5: User enters rate base unit code

The rate base unit codes “D” (Daily) or “B” (Bid Price) will be used by Enterprise. The <D>aily rate base unit code supports the hourly, daily, weekly, and monthly rates used by the existing SI application as well as NatRes Exception rates. The <B>id Price rate base unit will be used for NatRes Bid Price (Active) rates.

The Other rate base unit codes include “V” (variable), and “P” (Package) and will be introduced as required by the other lines of business.

**Step 6: User enters discount applicability flag for this product and location**

Valid values are “Y” and “N”. A “Y” in this field indicates that discounts may be applied to the underlying rate detail. An “N” in this field indicates that no discounts may be applied to the associated rates.

**Step 7: User enters primary rate indicator**

If this product is to be considered the “primary rate” of this product type at the specified location, a “P” is entered in the primary rate field. An “S” is entered if the product is secondary. The first rate header of a given product type created at a specific location should be flagged as <P>primary.

**Step 8: User selects appropriate rate qual for this product offering <Optional>**

User selects rate qual from pick list. The value to be stored is an integer. The pick list should display the textual description of the quals. The data maintenance process will verify that a valid qual is entered or selected.

**Step 9: User attempts to save the new record.**

**Step 10: The data maintenance process validates combination of user defined area name and user defined area type**

Return error if invalid

**Step 11: The data maintenance process checks for existing rate header for the product, location, and effective dates**

The data maintenance process verifies that there are no existing entries in the rate header table (RATES\_HEADER) for the specified product, user defined area, and user defined area type where the effective start and end dates of an existing row overlap the start and end dates of the row being created. If an existing rate header is found, an error message is returned and no record is created.

**Step 12: The data maintenance process verifies primary rate indicator**

If rate header being created has primary rate indicator set to “P”, the data maintenance process checks for other active products of the same type at the same location also flagged as primary. If an existing rate header for a product of the same type at the same location is flagged as primary, an error message is generated and no record is created.

**Step 13: The data maintenance process gathers data from related product tables**

The data maintenance process retrieves currency code, tax and surcharge flags, fuel bundling flag, product type, and product family from related product tables and populates new rate header with these values.

**Step 14: New rate header sequence number generated**

The data maintenance process retrieves a sequence number from rate header sequence number generator and inserts this value into the RTH\_UNIQ\_ID field on the rate header record.

**Step 15: The data maintenance process inserts new row into rate header table**

CREATE\_OPER\_ID field is populated with the ID of the user who created the new record. CREATE\_DT field is set to current date and time.

Step 16: The data maintenance process formats associated rate detail usages row (RATE\_DETAIL\_USAGES) as follows:

Rate Detail Usage Column	Source
RH RTH UNIQ ID	RTH UNIQ ID from new rate header
RH RTH UNIQ ID REF	RTH UNIQ ID from new rate header
RES START DT	EFFC START DT from new rate header
RES END DT	EFFC END DT from new rate header
CO START DT	EFFC START DT from new rate header
CO END DT	EFFC END DT from new rate header
CREATE OPER	CREATE OPER ID from new rate header
CREATE DT	Current system date/time

*RES and CO start and end dates will contain both the date and time w/time in hours, minutes, and seconds.*

Step 17: The data maintenance process inserts rate detail usages row into rate detail usages table (RATE\_DETAIL\_USAGES).

Step 18: The data maintenance process formats rate header qual association row <If Entered> (RATE\_HEADER\_QUAL\_ASSN)

Retrieve RATE\_HEADER\_QUAL\_ASSN sequence number from rate header qual association sequence number generator

Format the new row as follows:

Rate Header Qual Assn Column	Source
RHQA_UNIQ_ID	Generated sequence number
RH RTH UNIQ ID	RTH UNIQ ID from new rate header
RDB DRTN BND CD	Value selected from rate qual pick list
RES START DT	EFFC START DT from new rate header
RES END DT	EFFC END DT from new rate header
EFFC START DT	EFFC START DT from new rate header
EFFC END DT	EFFC END DT from new rate header
CREATE OPER	CREATE OPER ID from new rate header
CREATE DT	Current system date/time

*RES and EFFC start and end dates will contain both the date and time w/time in hours, minutes, and seconds.*

Step 19: The data maintenance process inserts rate header qual association row into rate header qual association table (RATE\_HEADER\_QUAL\_ASSN).

Step 20: Upon successful insertion of the rate header (RATES\_HEADER), the rate detail usages (RATE\_DETAIL\_USAGES), and the rate header qual association table (RATE\_HEADER\_QUAL\_ASSN) rows, the data maintenance process issues commit.

The row is created in the rate header (RATES\_HEADER) table. The primary key for this record is a system generate sequence number – the rate header unique ID (RTH\_UNIQ\_ID). Rate detail usages row is also created. This table is used internally by the VRS rates engine to determine which set of rate detail to retrieve for the rate header. The rate header qual association entry associates reservation and pick up rules with this rate header.

### VRS Rates Header

Column Description	Column Name	Data Type	Remarks
#Rate Header Identifier	RTH_UNIQ_ID	Number(15)	System generated
User Defined Area	UDA_AREA_ID	Varchar2(8)	
User Defined Area Type	UDA_ATY_AREA_TYPE	Varchar2(10)	
Rate Header Description		Varchar2(35)	
Product Instance Code	PRC_PROD_INST_CD	Varchar2(8)	
* Product Family Code	PRD_PROD_ID	Varchar2(4)	Denormalized from product instance record.
* Product Type Code:	PRT_PROD_TYP_CD	Varchar2(2)	Retrieved from product family table
Effective Start Date	EFFC_START_DT	Date	Time in hh24:mi:ss format Suggest default to current date/time
Effective End Date	EFFC_END_DT	Date	Time in hh24:mi:ss format Suggest default to 31-DEC-2037 23:59:59
			* Currency Code CUR_CURR_CD Varchar2(3) Must be provided. Can be retrieved or validated based on station's currency for station level Rates_Header, or owning country for location hierarchy level Rates_Header.
Rate Base Unit	RT_BASE_UNIT_CD	Varchar2(1)	"D" for SI retail "B" for Bid Pricing NatRes rates
Primary Rate Indicator		Varchar2(1)	Valid values "P" and "S"
Discount Flag	DSCNT_FLG	Varchar2(1)	Indicates if discount may be applied to underlying rates. "Y" – Rates may be discounted "N" – Rates cannot have discount applied.
* Sales Tax Included Flag	SALES_TX_INCL_FLG	Varchar2(1)	Denormalized from product instance
* Surcharge Include Flag	SCHG_INCL_FLG	Varchar2(1)	Denormalized from product instance
* Fuel Included Flag		Varchar2(1)	Denormalized from product instance
* Bill Cycle Indicator	BILL_CYC_CDE	Varchar2(1)	Denormalized from product types
Record Create Date and Time	CREATE_DT	Date	Time in hh24:mi:ss format
Record Creation Operator	CREATE_OPER_ID	Varchar2(32)	

- \* Bolded fields represent attributes for Rates Header entity that are required for iteration 2.
- \* Fields marked by an asterisk are denormalized from the source indicated in the Remarks column.

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**VRS Rate Detail Usages**

The rate detail usages table row is created upon successful generation of a rate header record. Generation of the rate detail usage row is totally transparent to the end user.

<b>Column Description</b>	<b>Column Name</b>	<b>Data Type</b>	<b>Remarks</b>
<b>#Rate Header Identifier</b>	RH_RTH_UNIQ_ID	Number(15)	Copied from corresponding rate header. Describes rate header that "owns" this row.
<b>Rate Header Identifier Ref</b>	RH_RTH_UNIQ_ID_REF	Number(15)	Copied from corresponding rate header. Describes rate header that "owns" the rate detail that will be used by this rate header.
<b>Reservation Start Date</b>	RES_START_DT	Date	Set to value contained in EFFC_START_DT field of corresponding rate header Time portion is in hh24:mi:ss format
<b>Reservation End Date</b>	RES_END_DT	Date	Set to value contained in EFFC_END_DT field of corresponding rate header Time portion is in hh24:mi:ss format
<b>Rental Start Date</b>	CO_START_DT	Date	Set to value contained in EFFC_START_DT field of corresponding rate header Time portion is in hh24:mi:ss format
<b>Rental End Date</b>	CO_END_DT	Date	Set to value contained in EFFC_END_DT field of corresponding rate header Time portion is in hh24:mi:ss format
<b>#Record Create Date and Time</b>	CREATE_DT	Date	Time in hh24:mi:ss format
<b>Record Creation Operator</b>	CREATE_OPER	Varchar2(32)	

\*Bolded fields represent mandatory attributes for Rate Detail Usage entity.

Every rate header record will have at least one rate detail usages entry. The rate detail usages specifies which rate header "owns" the rate detail that the VRS rates engine will retrieve to calculate time and mileage charges for a particular rental.

**VRS Rate Header Qual Assn**

The rate header qual association table row is created upon successful generation of a rate header record. Generation of the rate header qual association row is totally transparent to the end user.

<b>Column Description</b>	<b>Column Name</b>	<b>Data Type</b>	<b>Remarks</b>
<b>#Rate Header Qual Identifier</b>	RHQA_UNIQ_ID	Number(15)	Generated by RHQA sequence number generator
<b>Rate Header Identifier</b>	RH_RTH_UNIQ_ID	Number(15)	Copied from corresponding rate header. Describes rate header that "owns" the this row.
<b>Rate Qual Code</b>	RDB_DRTN_BND_CD	Number(6)	Identifier of qual selected from rate qual pick list
<b>Reservation Start Date</b>	RES_START_DT	Date	Set to value contained in EFFC_START_DT field of corresponding rate header Time portion is in hh24:mi:ss format
<b>Reservation End Date</b>	RES_END_DT	Date	Set to value contained in EFFC_END_DT field of corresponding rate header Time portion is in hh24:mi:ss format
<b>Rental Start Date</b>	EFFC_START_DT	Date	Set to value contained in EFFC_START_DT field of corresponding rate header Time portion is in hh24:mi:ss format
<b>Rental End Date</b>	EFFC_END_DT	Date	Set to value contained in EFFC_END_DT field of corresponding rate header Time portion is in hh24:mi:ss format
<b>Record Create Date and Time</b>	CREATE_DT	Date	Time in hh24:mi:ss format
<b>Record Creation Operator</b>	CREATE_OPER	Varchar2(30)	

\*Bolded fields represent mandatory attributes for Rate Header Qual Association entity.

The rate header qual association row specifies which rate qual is associated to the header for the dates and times provided. The Rate Header Qual Assn entry is optional. If no entry is found for the reservation and rental dates, no restrictions apply.



2.1.2.1.1.1 Example 1 – Create Rate Header for Limited Mileage Product**Given:**

A limited mileage (“medium free miles per day”) retail product is to be made available at branch 0109. It will be available for reservation as soon as rates are defined. Based on future plans for club and association discounts, it is decided that the underlying rates can be discounted. No fuel, taxes, or surcharges will be bundled with the product. The product will offer 150 free miles per day.

**User Input:**

R	▼	Standard Retail Rates	RLLM	▼	Retail Limited Medium Free Miles
LIMMED	▼	Local Market Medium Free Daily Miles			

Product LIMMED is selected. The product code can be entered directly or by using the pick lists and scoping available on the user interface. (Optional scoping by product type and family shown)

0109	▼	ATY_BRANCH	▼	20-MAY-2001	31-DEC-2037
------	---	------------	---	-------------	-------------

User enters (or selects from pick list) location for rate header (branch **0109**)  
User accepts default effective start and end dates

Retail – 150 Free Miles/Day
-----------------------------

User enters a location specific description of the product offering

D	Y	P
---	---	---

User enters “D” for rate base unit  
User enters a “Y” indicating rates can be discounted  
User enters “P” to mark this as the primary retail rate at branch 0109

000001	▼	Daily Rental, Maximum 30 Days
--------	---	-------------------------------

User selects appropriate rate qual from pick list

User attempts to save new rate header

**System Response:**

The data maintenance process verifies a user defined area name 0109 with type “ATY\_BRANCH” exists. If no UDA exists, return error message and halt creation process.

### System Response (Continued):

The data maintenance process searches rate header table for an existing entry for product LIMMED at branch 0109 where the effective start and end dates overlap the input dates (20-MAY-2001, 31-DEC-2037) in some way. If existing rate header found, return error message and halt creation process.

The data maintenance process checks for another active rate header with product type "R" at branch 0109 being flagged as primary. If an existing primary rate exists, return error message and halt creation process. **If no other active rate header of the given product type is active at this location, primary rate indicator is set to "P".**

The data maintenance process retrieves product type code, product family code, tax, surcharge, and fuel inclusive flags from other product tables based on input product instance code and location.

The data maintenance process retrieves next rate header sequence number to assign from Oracle rates header sequence generator. If sequence number is not successfully retrieved, return error message and halt creation process.

The data maintenance process populates creation operator ID and creation date/time and inserts new rate header record

If rate header successful, data maintenance process formats and inserts new rate detail usages record

If rate detail usages insert successful, the data maintenance process retrieves next rate header qual association sequence number to assign from Oracle rates header qual association sequence generator. If sequence number is not successfully retrieved, return error message and halt creation process.

Data maintenance process formats and inserts new rate header qual association record

If creation and insert of rates header, rate detail usages, and rate header qual association were successful, data maintenance process issues database commit and returns success. If any insert fails, the data maintenance process issues database rollback and returns appropriate failure message.

The following record represents the row created in the rate header table (RATES\_HEADER):

Header ID	User Defined Area	UDA Type	Effective Start Date	Effective End Date	Product Instance	Prod Type	Prod Family	Rate Header Description
1	0109	ATY_BRANCH	20-MAY-2001 14:20:22	31-DEC-2037 23:59:59	LJMMED	R	RLMM	Retail — 150 Free Miles/Day

Rate Base Unit	Primary Rate Indicator	Discount Flag	Tax Incl	Schg Incl	Fuel Incl	Create Date	Create Operator	Bill Cycle
D	P	Y	N	N	N	20-MAY-2001 14:20:22	NCC1701	H

The following record represents the row created in the rate detail usages table (RATE\_DETAIL\_USAGES):

Header ID	Header ID Ref	Reservation Start Date	Reservation End Date	Rental Start Date	Rental End Date
1	1	20-MAY-2001 14:20:22	31-DEC-2037 23:59:59	20-MAY-2001 14:20:22	31-DEC-2037 23:59:59

Create Date	Create Operator
20-MAY-2001 14:20:22	NCC1701

The following record represents the row created in the rate header qual association table (RATE\_HEADER\_QUAL\_ASSN):

Rate Header Qual Assn ID	Rate Header Unique ID	Rate Qualification Code	Reservation Start Date	Reservation End Date	Rental Start Date	Rental End Date
1	1	1	20-MAY-2001 14:20:22	31-DEC-2037 23:59:59	20-MAY-2001 14:20:22	31-DEC-2037 23:59:59

Create Date	Create Operator
20-MAY-2001 14:20:22	NCC1701

2.1.2.1.1.2 Example 2 – Create Rate Header for a Weekend Special**Given:**

A weekend special retail product is to be made available at branch 0109. It will be available for reservation as soon as rates are defined. The associated rates can be discounted No fuel, taxes, or surcharges will be bundled with the product. The product will offer 150 free miles per day.

**User Input:**

S	▼	Special Rates	WSRT	▼	Weekend Special
WSLMRT	▼	Weekend Special Local Market			

Product WSLMRT is selected. The product code can be entered directly or by using the pick lists and scoping available on the user interface. (Optional scoping by product type and family shown)

0109	▼	ATY_BRANCH	▼	20-AUG-2001	31-DEC-2037
------	---	------------	---	-------------	-------------

User enters (or selects from pick list) location for rate header (branch **0109**)

User accepts default effective start and end dates

Weekend Special Branch 0109
-----------------------------

User enters a location specific description of the product offering

D	Y	P
---	---	---

User enters "D" for rate base unit

User enters a "Y" to allow the rates to be discounted

User enters "P" to mark this as the primary retail rate at branch 0109

000002	▼	Weekend Special Noon Thurs Pickup
--------	---	-----------------------------------

User selects appropriate rate qual from pick list

User attempts to save new rate header

**System Response:**

The data maintenance process verifies a user defined area name 0109 with type "ATY\_BRANCH" exists. If no UDA exists, return error message and halt creation process.

**System Response (Continued):**

The data maintenance process searches rate header table for an existing entry for product WSLMRT at branch 0109 where the effective start and end dates overlap the input dates (20-AUG-2001, 31-DEC-2037) in some way. If existing rate header found, return error message and halt creation process.

The data maintenance process checks for another active rate header with product type "S" at branch 0109 being flagged as primary. If an existing primary rate exists , return error message and halt creation process. **If no other active rate header of the given product type is active at this location, primary rate indicator is set to "P".**

The data maintenance process retrieves product type code, product family code, tax, surcharge, and fuel inclusive flags from other product tables based on input product instance code and location.

The data maintenance process retrieves next rate header sequence number to assign from Oracle rates header sequence generator. If sequence number is not successfully retrieved, return error message and halt creation process.

The data maintenance process populates creation operator ID and creation date/time and inserts new rate header record

If rate header successful, data maintenance process formats and inserts new rate detail usages record

If rate detail usages insert successful, the data maintenance process retrieves next rate header qual association sequence number to assign from Oracle rates header qual association sequence generator. If sequence number is not successfully retrieved, return error message and halt creation process.

Data maintenance process formats and inserts new rate header qual association record

If creation and insert of rates header, rate detail usages, and rate header qual association were successful, data maintenance process issues database commit and returns success. If any insert fails, the data maintenance process issues database rollback and returns appropriate failure message.

The following record represents the row created in the rate header table (RATES\_HEADER):

Header ID	User Defined Area	UDA Type	Effective Start Date	Effective End Date	Product Instance	Prod Type	Prod Family	Rate Header Description
7	0109	ATY_BRANCH	20-AUG-2001 14:20:22	31-DEC-2037 23:59:59	WSLMRT	S	WSRT	Weekend Special Branch 0109

Rate Base Unit	Primary Rate Indicator	Discount Flag	Tax Incl	Schg Incl	Fuel Incl	Create Date	Create Operator	Bill Cycle
D	P	Y	N	N	N	20-AUG-2001 14:20:22	HAL2001	H

The following record represents the row created in the rate detail usages table (RATE\_DETAIL\_USAGES):

Header ID	Header ID Ref	Reservation Start Date	Reservation End Date	Rental Start Date	Rental End Date
7	7	20-AUG-2001 14:20:22	31-DEC-2037 23:59:59	20-AUG-2001 14:20:22	31-DEC-2037 23:59:59

Create Date	Create Operator
20-AUG-2001 14:20:22	HAL2001

The following record represents the row created in the rate header qual association table (RATE\_HEADER\_QUAL\_ASSN):

Rate Header Qual Assn ID	Rate Header Unique ID	Rate Qualification Code	Reservation Start Date	Reservation End Date	Rental Start Date	Rental End Date
3	7	2	20-AUG-2001 14:20:22	31-DEC-2037 23:59:59	20-AUG-2001 14:20:22	31-DEC-2037 23:59:59

Create Date	Create Operator
20-AUG-2001 14:20:22	HAL2001



### 2.1.2.1.1.3 Example 3 – Create Rate Header for Bid Pricing Rate

**Given:**

A retail product using Bid Price rates is to be made available at branch 0110. It will be available for reservation as soon as rates are defined. The associated rates may be discounted. Based on future plans for distribution channel discounts, it is decided that the maximum discount that can be applied to this product at branch 0109 is 20%. No fuel, taxes, or surcharges will be bundled with the product. The product will unlimited free miles.

**User Input:**

R	▼	Standard Retail Rates	BIDR	▼	Bid Price Retail Rates
BIDRTL	▼	Bid Price Retail Product			

Product BIDRTL is selected. The product code can be entered directly or by using the pick lists and scoping available on the user interface. (Optional scoping by product type and family shown)

0110	▼	ATY_BRANCH	▼	20-AUG-2001	31-DEC-2037
------	---	------------	---	-------------	-------------

User enters (or selects from pick list) location for rate header (branch 0110)

User accepts default effective start and end dates

Bid Price Rate Branch 0110
----------------------------

User enters a location specific description of the product offering

B	Y	P
---	---	---

User enters "B" for rate base unit

User enters a "Y" indicating associated rates may be discounted

User enters "P" to mark this as the primary retail rate at branch 0110

No rate qual is attached to this rate header

User attempts to save new rate header

**System Response:**

The data maintenance process verifies a user defined area name 0110 with type "ATY\_BRANCH" exists. If no UDA exists, return error message and halt creation process.

**System Response (Continued):**

The data maintenance process searches rate header table for an existing entry for product BIDRTL at branch 0110 where the effective start and end dates overlap the input dates (20-AUG-2001, 31-DEC-2037) in some way. If existing rate header found, return error message and halt creation process.

The data maintenance process checks for another active rate header with product type "R" at branch 0110 being flagged as primary. If an existing primary rate exists , return error message and halt creation process. **If no other active rate header of the given product type is active at this location, primary rate indicator is set to "P".**

The data maintenance process retrieves product type code, product family code, tax, surcharge, and fuel inclusive flags from other product tables based on input product instance code and location.

The data maintenance process retrieves next rate header sequence number to assign from Oracle rates header sequence generator. If sequence number is not successfully retrieved, return error message and halt creation process.

The data maintenance process populates creation operator ID and creation date/time and inserts new rate header record

If rate header successful, data maintenance process formats and inserts new rate detail usages record

If rate detail usages insert successful, the data maintenance process retrieves next rate header qual association sequence number to assign from Oracle rates header qual association sequence generator. If sequence number is not successfully retrieved, return error message and halt creation process.

If creation and insert of rates header, and rate detail usages were successful, data maintenance process issues database commit and returns success. If any insert fails, the data maintenance process issues database rollback and returns appropriate failure message.

The following record represents the row created in the rate header table (RATES\_HEADER):

Header ID	User Defined Area	UDA Type	Effective Start Date	Effective End Date	Product Instance	Prod Type	Prod Family	Rate Header Description
9	0110	ATY_BRANCH	20-AUG-2001 18:46:03	31-DEC-2037 23:59:59	BIDRTL	R	BIDR	Bid Price Rate Branch 0110

Rate Base Unit	Primary Rate Indicator	Discount Flag	Tax Incl	Schg Incl	Fuel Incl	Create Date	Create Operator	Bill Cycle
P	P	20	N	N	N	20-AUG-2001 18:46:03	HAL2001	H

The following record represents the row created in the rate detail usages table (RATE\_DETAIL\_USAGES):

Header ID	Header ID Ref	Reservation Start Date	Reservation End Date	Rental Start Date	Rental End Date
9	9	20-AUG-2001 18:46:03	31-DEC-2037 23:59:59	20-AUG-2001 18:46:03	31-DEC-2037 23:59:59

Create Date	Create Operator
20-AUG-2001 18:46:03	HAL2001

No rate header qual association row (RATE\_HEADER\_QUAL\_ASSN) was created.

#### 2.1.2.1.2 Scenario Extensions

#### 2.1.2.1.3 Scenario Variations

##### 2.1.2.1.3.1 User Updates Rates Header

A number of fields on the rate header are potentially available for update. Each of these fields are discussed below. Any successful update will result in the data maintenance process setting the update operator and date values appropriately and committing the change.

##### 2.1.2.1.3.2 Rate Header Description

The rate header description may be updated as business conditions warrant (i.e. free mileage limit on medium mileage rate changes from 150 to 100 per day). The user overtypes the existing text and saves the record.

##### 2.1.2.1.3.3 Primary Rate Indicator

The primary rate indicator may be updated. If the indicator is set to "P", the data maintenance process must check for any other products of the same type at the same location also flagged as <P>primary.

If an existing primary rate is located, the user is given the choice of continuing with the update or canceling it. If the user chooses to continue, The existing record is updated and it's primary indicator is set to "S". The record updated by the user has it's primary indicator set to "P" and both changes are committed. If the user chooses to cancel the update, the primary indicator on the updated record is set to it's initial value and no updates take place.

##### 2.1.2.1.3.4 Effective End Date

The effective end date of the rate header represents the last date and time that a reservation may be taken for the product and location represented by the rate header. Effective end date can be updated to:

- Any valid date that is less than the current value of effective end date.(Effective end date cannot be extended)
- Any valid date that is greater than or equal to the current date (effective end date cannot be back-dated).

If the effective end date is set to the current date, the time portion is set to current time. If the effective end date is set to a future date, the time portion is set to 23:59:59.

End dating a rate header is one way of discontinuing a product offering at the given location. Regardless of the dates on any tables associated to the rate header (rate detail, rate quals, etc.), once the rate header is inactive (inactive being defined as having an effective end date in the past), all associated data is also considered inactive.

Before the data maintenance process allows a rate header to be end dated, it must first verify that no other rate headers are sharing or referencing the rates of the rate header being end dated.

##### 2.1.2.1.3.5 User Deletes a Rate Header

The user cannot delete a rate header. Rate headers can be end dated to discontinue the product offering (see rate header updates above).

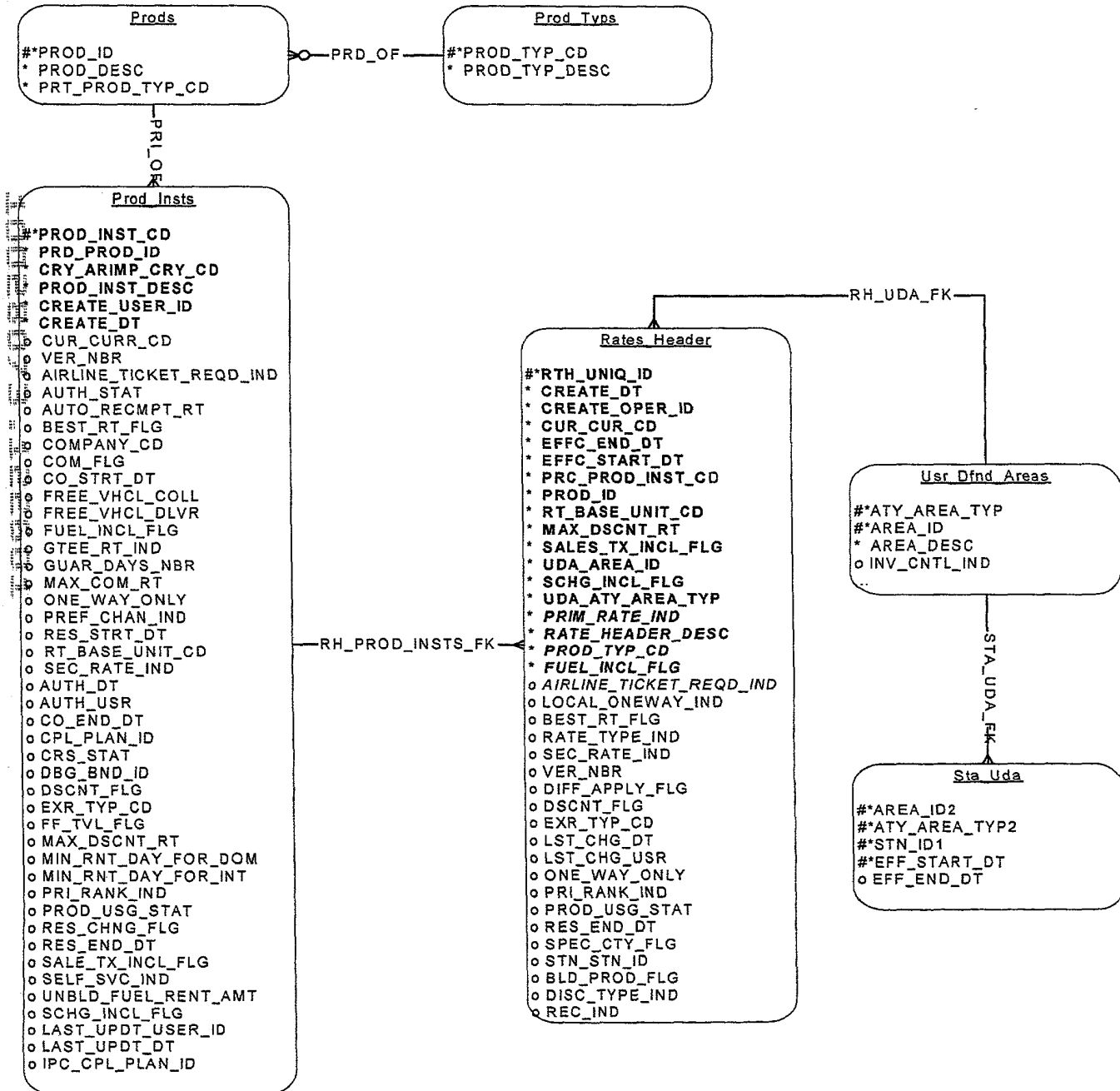
#### 2.1.2.1.4 Related Information

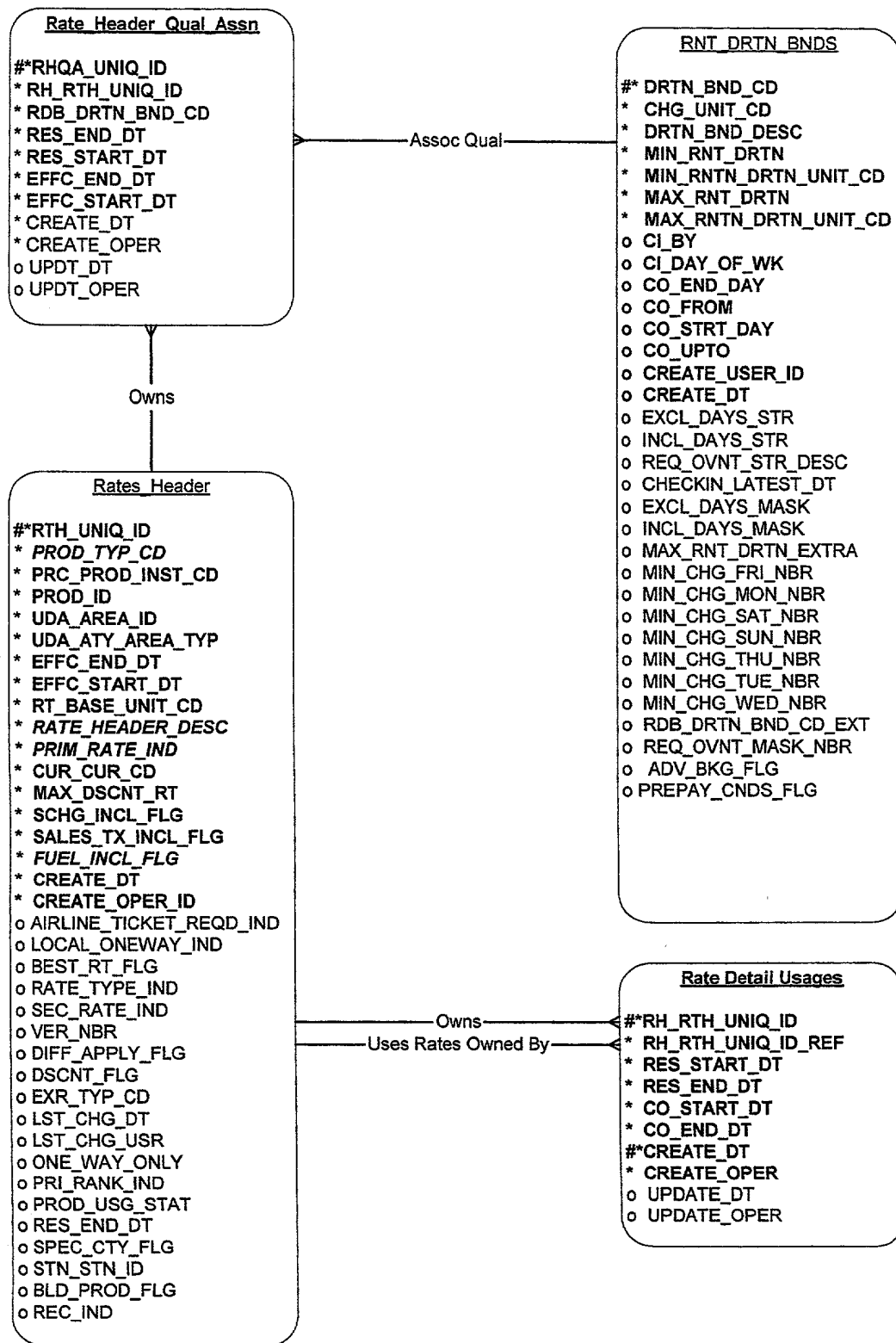
### 2.1.2.1.5 References/Appendix –A

#### Data Model for VRS Rates Header

Product Type, Product Family, Product Instance, Rate Header, and User Defined Area Relationships

#### Rate Header, Rate Header Qual Association, Rate Qual, and Rate Detail Usages Relationships





### 2.1.2.2 Use Case: User Creates Reservation Applicability

VRS reservation applicability allows the user to define which distribution channels (Voice, Web, GDS, Branch, etc.) are eligible to reserve a given product for pick up at a specified level of the rates hierarchy. When a reservation is made, the VRS pricing engine checks the input reservation source and pick up location against the reservation applicability table and verifies that it is eligible to reserve the requested product.

No distribution channel hierarchy or rates hierarchy traversal is performed for reservation applicability. The rates engine takes the product code, user defined area name, and user defined area type from a candidate rate header and searches for an exact match in the reservation applicability table based the distribution channel passed by the caller. This approach to reservation applicability is similar in concept to the way reservation applicability is implicitly implemented in the existing NatRes system using the NR150P discounts file. Appendix A provides a number of scenarios to illustrate the concept.

Every product instance can have one or more entries associating valid reservation sources with the product.

<b>Goal In Context:</b>	Create the entries necessary to allow a product to be reserved by distribution channels appropriate for the product. When the task is complete, the appropriate data will be added to the PROD_AVLS table.
<b>Scope:</b>	This Use Case deals with Create activity on the VRS reservation applicability table. (PROD_AVLS).
<b>Level:</b>	
<b>Pre-Condition:</b>	Product instance table populated. Distribution channels table defined and populated. Associated rates header created.
<b>Success End Condition:</b>	Reservation applicability created.
<b>Failed End Condition:</b>	Reservation applicability not created successfully
<b>Primary Actor:</b>	User responsible for maintaining reservation applicability data (Super User).
<b>Trigger Event:</b>	New reservation applicability is created.

#### 2.1.2.2.1 Main Success Scenarios

The steps to creating reservation applicability for a standard retail product are shown below.

##### Step 1: User specifies product instance

User specifies the product instance that the availability rule will be associated with. The product instance specified must already exist in the product instance table (PROD\_INSTS).

##### Step 2: User specifies availability

User chooses the distribution channel(s) from a pick list that contain valid reservation channels

##### Step 3: User specifies valid start and end dates

User provides the date range that the input reservation applicability record will be valid for. Input effective start date must be greater than or equal to current date. Input effective end date must be greater than input effective start date. Suggest a default of current date (effective start date) and 31-DEC-2037 (effective end date).

#### Step 4: User specifies rate hierarchy location

User provides user defined area name and type that the entry is applicable for. The UDA name and type entered will be matched against the user defined area name and type established on a rate header for the given product.

#### Step 5: User saves record.

#### Step 6: System Validates input distribution channel

Return error if invalid

#### Step 7: System retrieves Rate Header ID based on input Product Instance code and UDA name and type

Return error if not found

#### Step 8: System retrieves product availability sequence number

#### Step 9: System saves record

The input record is written to the PROD\_AVLS table. The primary key for this record is the sequence number prod\_avls\_id.

Column Description	Column Name	Data Type
Product Availability Sequence Number	prod_avl_id	Number()
Product Code	prc_prod_inst_cd	Varchar2(8)
Availability type <R>eservation	avl_for	Varchar2(1)
User Defined Area Name	uda_area_id	Varchar2(10)
User Defined Area Type	uda_aty_area_type	Varchar2(10)
Reservation start date of availability record	effc_start_dt	Date
Reservation end date of availability record	effc_end_dt	Date
Rate Header Unique Identifier	Rh_rth_uniq_id	Number(15)
Distribution Channel	dist_chan_id	Varchar2(8)
Include/Exclude indicator <I>nclude <E>xclude	incl_stat	Varchar2(1)



2.1.2.2.1.1 Scenario 1: User creates new product availability

The following data is provided by a user to create product availability:

Product Instance Code: **LIMMED**  
Distribution Channels: **Reserve from any Rental Branch**  
Effective Start Date: **01-JUN-2001**  
Effective End Date: **Ongoing**  
UDA Area ID: **01**  
UDA Type: **GROUP**

The goal is to make the LIMMED product defined for Group 01 available for reservation from any branch in the United States. This entry will apply to the rate header defined for the LIMMED product defined for Group 01 only.

R	▼	Standard Retail Rates	RLLM	▼	Retail Limited Medium Free Miles
LIMMED	▼	Local Market Medium Free Daily Miles			

User selects product LIMMED from list of valid domain values

01	▼	ATY_GROUP	▼
----	---	-----------	---

User selects user defined area defining geographical scope of the new row (Group 01).

Branch	Rental Branch	▼	I	Include	▼	R	Reservation	▼
--------	---------------	---	---	---------	---	---	-------------	---

User selects distribution channel from list of valid domain values

User Selects to Include for Reservation

01-JUN-2001	31-DEC-2037
-------------	-------------

User Sets Start date to June 1, 2001

User accepts default end date

User saves record

System validates user input

System retrieves next sequence number

System populates defaults

System writes new record

The following record represents a row in the reservation applicability table (PROD\_AVLS):

Avail ID	Product Code	Avail Type	Uda Area ID	Uda Aty Area Type	Effc Start Date	Effc End Date
0000001	LIMMED	R	01	ATY_GROUP	01-JUN-2001	31-DEC-2037

Rate Header Unique ID	Distributi on Channel	Include/ Exclude
000000001	Branch	I

#### 2.1.2.2.1.2 Scenario 2: Create Reservation applicability for a Bid Price Product

The following data is provided by a user to create a product availability:

Product Instance Code: **BIDRTL**  
Distribution Channels: **Available for Reservation through the GDS', Voice Reservations, and Web**  
UDA Area ID: **0110**  
UDA Type: **BRANCH**  
Effective Start Date: **01-JUN-2001**  
Effective End Date: **Ongoing**

R	▼	Standard Retail Rates	BIDR	▼	Bid Price Retail Rates
BIDRTL	▼	Bid Price Retail Product			

User selects product BIDRTL from list of valid domain values

0110	▼	ATY_BRANCH	▼
------	---	------------	---

User selects user defined area defining geographical scope of the new row (Branch).

GDS	GDS	▼	I	Include	▼	R	Reservation	▼
-----	-----	---	---	---------	---	---	-------------	---

User selects distribution channel from list of valid domain values

User Selects to Include for Reservation

01-JUN-2001	31-DEC-2037
-------------	-------------

User Sets Start date to June 1, 2001  
User accepts default end date  
User saves record  
System validates user input

System retrieves next sequence number  
System populates defaults  
System writes new record

The following figure represents the data in the reservation applicability table (PROD\_AVLS) :

Avail ID	Product Code	Avail Type	Uda Area ID	Uda Aty Area Type	Effc Start Date	Effc End Date
0000001	LIMMED	R	01	ATY GROUP	01-JUN-2001	31-DEC-2037
0000002	BIDRTL	R	0110	ATY BRANCH	01-JUN-2001	31-DEC-2037

Rate Header Unique ID	Distributi on Channel	Include/ Exclude
000000001	Branch	I
000000009	GDS	I

\* Bolded fields represents new entry in the table

The process is repeated for the internet and voice reservation distribution channels. After these two entries are created, the PROD\_AVLS table will contain the data shown in the figure below:

Avail ID	Product Code	Avail Type	Uda Area ID	Uda Aty Area Type	Effc Start Date	Effc End Date
0000001	LIMMED	R	01	ATY GROUP	01-JUN-2001	31-DEC-2037
0000002	BIDRTL	R	0110	ATY BRANCH	01-JUN-2001	31-DEC-2037
0000003	<b>BIDRTL</b>	R	<b>0110</b>	<b>ATY BRANCH</b>	<b>01-JUN-2001</b>	<b>31-DEC-2037</b>
0000004	<b>BIDRTL</b>	R	<b>0110</b>	<b>ATY BRANCH</b>	<b>01-JUN-2001</b>	<b>31-DEC-2037</b>

Rate Header Unique ID	Distributi on Channel	Include/ Exclude
000000001	Branch	I
000000009	GDS	I
<b>000000009</b>	<b>Web</b>	<b>I</b>
<b>000000009</b>	<b>Voice</b>	<b>I</b>

\* Bolded fields represent new entries in the table

#### 2.1.2.2.2 Scenario Extensions

#### 2.1.2.2.3 Scenario Variations

#### 2.1.2.2.3.1 User Updates Reservation Applicability

The only information that can be updated for an existing reservation applicability record is the effective end date. The reservation applicability record is invalid after the effective end date. The effective end date may be set to any valid date that is less than the existing effective end date and not less than the greater of either the effective start date or the current date. New reservation applicability records can be added at any time.

#### 2.1.2.2.3.2 User Deletes Reservation Applicability

A user does not have the ability to physically delete an existing reservation applicability record.

#### 2.1.2.2.4 **Related Information**

#### 2.1.2.2.5 **References/Appendix –A**

The following examples demonstrate how VRS reservation applicability will function.

##### Given

##### **Rate Header Data**

Header ID	User Defined Area	UDA Type	Effective Start Date	Effective End Date	Product Instance
1	01	ATY_GROUP	20-MAY-2001 14:20:22	31-DEC-2037 23:59:59	LIMMED
2	01A	ATY_REGION	20-MAY-2001 14:20:29	31-DEC-2037 23:59:59	LIMMED
9	0110	ATY_BRANCH	20-AUG-2001 18:46:03	31-DEC-2037 23:59:59	BIDRTL

Prod Type	Prod Family	Rate Header Description
R	RLMM	Retail Group 01 – 150 Free Miles/Day
R	RLMM	Retail Region 01A – 150 Free Miles/Day
R	BIDR	Bid Price Rate Branch 0110

**Reservation Applicability Data**

Avail ID	Product Code	Avail Type	Uda Area ID	Uda Aty Area Type	Effc Start Date	Effc End Date
0000001	LIMMED	R	01	ATY GROUP	01-JUN-2001	31-DEC-2037
0000002	BIDRTL	R	0110	ATY BRANCH	01-JUN-2001	31-DEC-2037
0000003	BIDRTL	R	0110	ATY BRANCH	01-JUN-2001	31-DEC-2037
0000004	BIDRTL	R	0110	ATY BRANCH	01-JUN-2001	31-DEC-2037

Rate Header Unique ID	Distributi on Channel	Include/ Exclude
000000001	Branch	I
000000009	GDS	I
000000009	Web	I
000000009	Voice	I

#### 2.1.2.2.5.1 Scenario 1

**Reservation call:**

Reservation request is made for a retail product for pick up at branch 0110.  
Reservation source is rental branch.

**Rate Header Candidate:**

Branch 0110 is a member of group 01.Branch 0110 is **not** a member of Region 01A. The rate header defined for product LIMMED at location 01  
ATY\_GROUP is selected.

**Reservation Applicability:**

The reservation applicability table is searched using the input distribution channel representing a rental branch, product LIMMED, user defined area name 01 and user defined area type of ATY\_GROUP. A matching entry is found, so the product may be offered.

#### 2.1.2.2.5.2 Scenario 2

**Reservation call:**

Reservation request is made for a retail product for pick up at branch 0163.  
Reservation source is rental branch.

**Rate Header Candidate:**

Branch 0163 is a member of group 01.Branch 0163 is a member of Region 01A. The rate header defined for product LIMMED at location 01A ATY\_REGION is selected.

**Reservation Applicability:**

The reservation applicability table is searched using the input distribution channel representing a rental branch, product LIMMED, user defined area name 01A and user defined area type of ATY\_REGION. A matching entry is not found, so the product will not be offered.

**Note that the reservation applicability search required an exact match on distribution channel, user defined area name and user defined area type. No traversal of the distribution channel hierarchy or rates hierarchy was performed.**



ECARS V2.0  
Accurate Out the Door Pricing  
Detailed Design Specification  
Charge Engine  
Iteration 3 - Final

**perotsystems™**

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## Gaps Addressed Summary

Gap ID	Functional Area	Brief Description
91	RateEngine, ChargeEngine, Product/Rate	Car class definition is made up of 2 components, class and suffix
118	ChargeEngine, Coverage Engine	Offer weekly and monthly rental charges for coverage in addition to daily.
135	ChargeEngine	API definition and infrastructure work
136	ChargeEngine, AncillaryEngine	Young renter, Additional driver, After Hours fee handling

## Document Control

### Primary Document Owner/Domain

Issued by: (PSC)

Name	Position/Department	Signature	Date
Jack Koomen	Manager/Charge Calculation-Allocation		05/16/01

### Customer Approval

Authorized by: (ERAC)

Name	Position/Department	Signature	Date

## Document History

Version	Date	Author	Reason for Change
1.0	05/14/01	Renault Gonel	Initial draft of Design Document
1.1	05/16/01	Renault Gonel	Edit for feedback - Internal Review
1.2	05/21/01	Renault Gonel	- Update scenario section with sample data. - Gray out section of input structure that will not be used in Iteration 2
1.3	05/23/01	Renault Gonel	Edit for feedback - Internal Review
2.0	06/06/01	Renault Gonel	Edits from Customer Review - Add Standard Header reference to Input API section
2.1	08/20/01	Renault Gonel	<i>Update Surcharge and Tax engine sections for iteration 3. Also edited following sections::</i> <i>3.1.1 - Inputs</i> <i>3.1.3.1.1 - Equipment</i> <i>3.1.3.1.3 - Refuel</i> <i>3.1.3.1.10 - Surcharges</i> <i>3.1.3.1.11 - Taxes</i> <i>3.1.4 - Optimization (New section)</i> <i>3.1.5 - Reworked Examples</i> <i>4.2.4 - Vehicle Exchange</i> <i>4.2.5 - Rate Optimization</i>
2.2	08/30/01	Renault Gonel	Apply feedback from Internal Review
2.3	09/10/01	Renault Gonel	Add changes to process completely the output of the Ancillary Engine regarding fuel charges (FN_BENG_RFLG_PAY_TYPE): Sections - 3.1.1, 3.1.3.1.3 and 3.1.5.4

# 1 Introduction

## 1.1 Overview

The purpose of this document is to provide detailed design specifications of how the charge engine component of VRS will be utilized in estimating and allocating charges for the retail line of business. This will reflect complete design of each of the impacted areas with reference to gaps that will be delivered through iteration 3 of ECARS 2.0. This document is specifically for the charge engine. In this iteration of the project, appropriate changes are made to the charge engine to enable it to interface properly to the modified Tax and Surcharge engines.

## 1.2 Dependencies

Dependencies with ERAC's Test windows etc.

## 1.3 Data Conversion

High level impacts to Data Conversion. A separate document will be published for data conversion design.

## 1.4 Impact Analysis

The charge engine depends on data retrieved from the database via each of the functional areas defined for ECARS 2.0. In general, most of the information required to generate a charge line item is already known. In order to minimize I/O operation to the database, the input interface is designed so that the information can be passed directly to the charge engine.

### 1.4.1 Charge Engine

All the charge frequencies required by ERAC are already supported by VRS except for the Coverage engine. Appropriate changes are needed to both the interface and service module to process a 'per Week' and 'per Month' rates for coverage processing. This requirement is defined in Gap 118.

A new Tux server providing the primary ancillary charges (young renter, additional driver and after hour fees) must be called by the client application to obtain the required data to create a charge line item. That service should be called prior to calling the charge engine, when required. In cases where multiple instances of a charge type (such as young renter) need to be created, the calling application should call the service multiple times and package the data in the manner required for the charge engine (See input section 3.1.1 below). This new engine has been extended to retrieve fuel pricing (pre-pay and post-pay) for a given ticket – the application selects one of those and passes the

information to the charge engine for line item generation. The Ancillary Engine design document provides additional details on this feature.

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## 2 Design Specifications – Major Functions

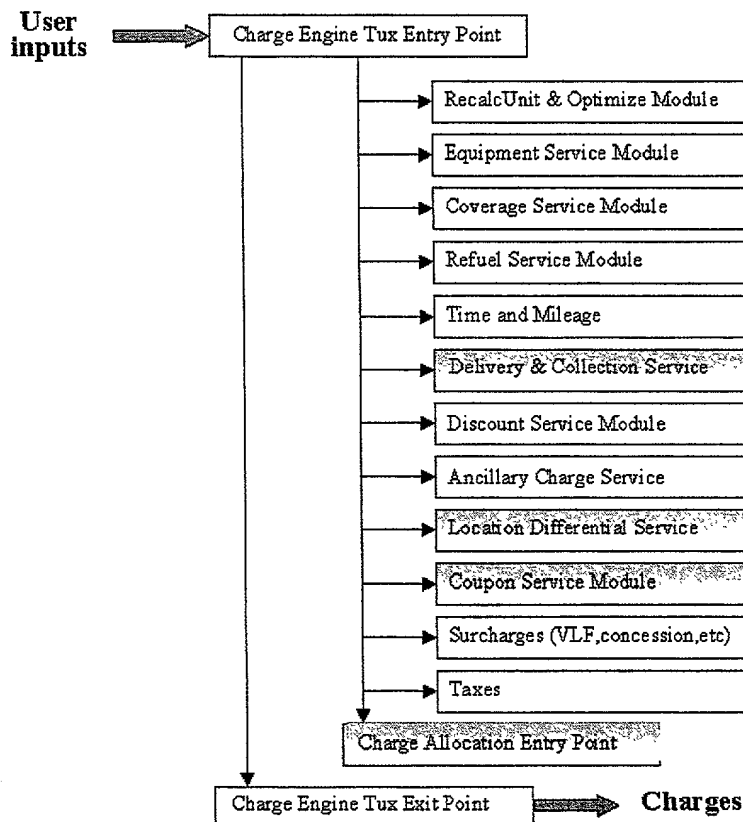
### 2.1 Charge Engine Service

#### 2.1.1 Process Overview/Flow

The VRS Charge Engine takes various rental agreement data and creates a list of line item charges for a ticket. These charges are returned to the user or client application via the Tuxedo Output interface described in the output section of this document.

#### 2.1.2 Detailed Design Description

The charge engine is a collection of 'C' and 'Pro\*C' programs that perform the charge calculation and where required, it calls a separate routine to allocate the charges to the appropriate payer(s). The following service modules make up the charge engine proper:



The charge engine is a Tuxedo server. Client processes interface to it directly by initializing the appropriate FML fields and submitting the request via a Tuxedo system call. The next section

describes the input interface for the charge engine. For iteration 2 and 3 of the ERAC implementation, the interface to the charge engine will be modified to accommodate multiple vehicle classes so that all charges can be calculated at once. Although the Tuxedo views will be designed initially to include a count field for products and rates, the first iteration will allow for one product, one rate. Future iterations will allow for rate changes. In order to support vehicle exchange, clients will be allowed to specify multiple car classes. Additionally, all the charges will be allocated to the renter. This ability to use multiple groupings for rate specification will be used when Weekend special products are used. This allows the charge engine to process the pre-special and post-special periods as required by ERAC.

### 2.1.3 Database Table Impacts

VRS includes a comprehensive set of routines for calculating refuel charges. Those routines need access to certain tables that will not be used in the ECARS 2.0 implementation. Vehicle unit information will not be available until next year and hence price and units for fuel will be passed to the charge engine from the GUI. Additionally, the charge engine uses a set of reference tables for obtaining appropriate charge types when creating a line item. As charge types represent a fundamental piece of a charge item, those tables must be populated with the appropriate information - section 3.0 shows a representative set of data.

### 2.1.4 DDL Changes

Each charge type is defined in VRS via two database tables:

- RRA\_CHG\_TYPS                      Define valid charge types
- RNT\_AGR\_CHG\_CATS              Define categories of charges

In addition to the above tables, the charge engine uses RNT\_AGR\_CHG\_UNIT\_TYPS table to pick up a code used in creating auxiliary keys for each line item created. The charge engine will continue to generate the auxiliary keys although they will not be included as part of the data passed back to the client application.

#### 2.1.4.1 RRA\_CHG\_TYPS

This table defines all the valid charge types within VRS. The discountable field is being added to satisfy a future requirement for discounts. Discussions are under way between Perot and Enterprise to include the definition of a chart of accounts and its relationship to the charge items created by the charge engine. It would be possible to conform to an external set of charge type values such as the ones used by Peoplesoft by populating the RRA\_CHG\_TYPS table with the desired values.

## RRA\_CHG\_TYPS

### Columns

CHG_TYP	VARCHAR2(5)	NOT NULL
CHG_DESC	VARCHAR2(35)	NOT NULL
CHG_USE	VARCHAR2(1)	NOT NULL
COST_CNTR_TYP	VARCHAR2(2)	NOT NULL
GLT_SEQ	NUMBER(6)	NOT NULL
INP_OUT_TX	VARCHAR2(1)	NOT NULL
NET_REV_USE	VARCHAR2(1)	NOT NULL
RCC_CHG_CAT	VARCHAR2(3)	NOT NULL
TXBL	VARCHAR2(1)	NOT NULL
DISCOUNTABLE	VARCHAR2(1)	NOT NULL
CHG_SEQ	NUMBER(6)	
GROSS_REV_FLG	VARCHAR2(1)	DEFAULT 'N'

### Primary Key

CHG\_TYP

### Indexes

### Foreign Keys

RCT\_FK (RCC\_CHG\_CAT) REFERENCES RNT\_AGR\_CHG\_CATS (CHG\_CAT)

### Check Constraints

VALID\_RULE281 ( gross\_rev\_flg IN ( 'Y' , 'N' ) )  
 SYS\_C003600 ( chg\_use IN ( 'B' , 'F' , 'C' , 'A' , 'D' , 'Q' ) )  
 SYS\_C003601 ( cost\_cntr\_typ IN ( 'CI' , 'CO' , 'VO' , 'BL' , 'AC' ,  
 BA' , 'CP' , 'CV' , 'FL' , 'VH' , 'LO' , 'BO' ) )  
 SYS\_C003602 ( inp\_out\_tx IN ( 'I' , 'O' ) )

## 2.1.4.2 RNT\_AGR\_CHG\_CATS

This table, when joined with the RCT\_CHG\_TYPS table, allow categorization of charges. This functionality is not required for any of the ECARS 2.0 iterations, but will allow for future enhancements when posting the charges.

## RNT\_AGR\_CHG\_CATS

### Columns

CHG_CAT	VARCHAR2(3)	NOT NULL
CHG_CAT_DESC	VARCHAR2(35)	NOT NULL
CHG_SEQ	NUMBER(6)	

### Primary Key

CHG\_CAT

### Indexes

### Foreign Keys

### Check Constraints

The 'CHG\_SEQ' field represents the charge type sequence and the category sequence for RRA\_CHG\_TYS and RNT\_AGR\_CHG\_CATS respectively. The sequence numbers can be used by presentation software to order the charges for any customer document or display of the charges.

RCT\_SEQ      Charge Type Sequence  
RCC\_SEQ      Charge Category Sequence

Below is a representative set of data contained in the tables.

CHG_CAT	CHG_TYP	CHG_DESC	TAXABLE	RCT_SEQ	RCC_SEQ
RNT	00001	TIME & DISTANCE	Y	1	1
RNT	00002	EXTENSION - TIME & DISTANCE	Y	3	1
RNT	00003	UPGRADE - TIME & DISTANCE	Y	4	1
RNT	00004	EXTRA DISTANCE-TIME & DISTANCE	Y	7	1
DIS	00005	DISCOUNT - TIME & DISTANCE	Y	1	2
INS	00006	CDW / LDW	Y	1	4
INS	00007	PAI	Y	2	4
INS	00008	THEFT WAIVER	Y	3	4
INS	00009	GOODS IN TRANSIT	Y	4	4
INS	00010	OTHER INSURANCE	Y	5	4
INS	00011	INSURANCE EXCESS	Y	6	4
SPE	00012	RENT - SPECIAL EQUIPMENT	Y	1	5
SPE	00013	REPLACE - SPECIAL EQUIPMENT	Y	2	5
CDR	00014	COMMUNICATION DEVICE RENTAL	Y	1	24
CDR	00015	COMMUNICATION DEVICE REPLACEMENT	Y	2	24
CDU	00016	COMMUNICATION DEVICE UNITS	Y	1	25
ONW	00017	DROP CHARGE	Y	1	6
DAC	00018	DELIVERY	Y	1	7
DAC	00019	COLLECTION	Y	2	7
AFH	00020	AFTER HOURS	Y	1	8
ALW	00021	ALLOWANCE	Y	1	9
FUL	00022	REFUELING SERVICE CHARGE	Y	1	12
SUR	00024	AIRPORT SURCHARGES	Y	1	15
SUR	00025	OPTIONAL SURCHARGES	Y	2	15
VAT	00028	VALUE ADDED TAX	N	5	17
RNT	00029	UNLIMITED DISTANCE-TIME & DISTANCE	Y	8	1
LDF	00030	LOCATION DIFFERENTIAL	Y	1	3
INS	00031	PERSONNEL EFFECTS COVERAGE	Y	8	4
INS	00032	SUPPLEMENTARY LIABILITY INSURANCE	Y	9	4
INS	00033	PEACE OF MIND	Y	10	4
QSP	00034	QUALITY SERVICE PROGRAM*	Y	1	10
FUL	00035	FUEL SERVICE OPTION	Y	2	12
YRT	00036	YOUNG RENTER FEE	Y	1	13
ADR	00037	ADDITIONAL DRIVER	Y	1	14
SUR	00038	CONTRACT MANDATED SURCHARGE	Y	3	15
SUR	00039	LEGAL MANDATED SURCHARGE	Y	4	15
CPN	00044	DOLLARS - COUPON*	N	1	18
CPN	00045	FREE DAY - COUPON*	N	2	18
CPB	00046	BUSINESS ACCT - COUPON	N	1	19
CPD	00047	DRIVER - COUPON	N	1	20
RNT	00048	FREE DISTANCE - TIME & DISTANCE	Y	5	1
VAT	00050	STATE TAX	N	1	17
MIS	00051	MISCELLANEOUS	Y	1	11



CHG_CAT	CHG_TYP	CHG_DESC	TAXABLE	RCT_SEQ	RCC_SEQ
RNT	00052	EXTRA - TIME & DISTANCE	Y	2	1
VAT	00053	COUNTY TAX	N	2	17
RNT	00054	EXTRA FREE DISTANCE-TIME & DISTANCE	Y	6	1
VAT	00055	CITY TAX	N	3	17
VAT	00056	DISTRICT TAX	N	4	17
CPN	00057	FORFEITED VALUE - COUPON*	N	3	18
SVH	00060	FVV DRIVER EXCESS - DVR INV	Y	1	21
SVI	00061	FVV DRIVER EXCESS - VCH INV	Y	1	22
VAT	00063	INSURANCE TAX	N	6	17
INS	00066	STAND LIABLE	Y	7	4
SPE	00067	BOOSTER SEAT - SPECIAL EQUIPMENT	Y	1	5
SPE	00068	CHILD SEAT - SPECIAL EQUIPMENT	Y	1	5
SPE	00069	INFANT SEAT - SPECIAL EQUIPMENT	Y	1	5
SPE	00070	LUGGAGE RACK - SPECIAL EQUIPMENT	Y	1	5
SPE	00071	CELL PHONE - SPECIAL EQUIPMENT	Y	1	5
SPE	00072	SKI RACK - SPECIAL EQUIPMENT	Y	1	5
SPE	00073	TIRE CHAINS - SPECIAL EQUIPMENT	Y	1	5
RNT	00000	PKG BASE DURATION	Y	1	1
CPN	00077	DOLLAR - COUPON	N	4	18
CPN	00078	FREE DAY - COUPON	N	5	18
CPN	00079	FORFEITED VALUE - COUPON	N	6	18

## 3 VRS Engines/ Services Design Specifications

### 3.1 Charge Engine

The Charge Engine obtains most of the information it needs from the input parameters. Many of the input parameters, if not populated, will cause the Charge Engine to produce a "partial" list of charges. That is, if all of the required input arguments are not populated prior to calling the Charge Engine, the charges that get created will be a subset of the charges that could be created for that rental agreement. All input arguments are copied into a structure and passed to the tuxedo service module for processing. All internal charge creation routines (ropu0xxx) take its input arguments directly from this structure. The interface to the charge engine is defined in BILENGTF001\_fields and BILENGTV001\_views.

#### 3.1.1 Inputs

**Note:**

1. The attribute 'exc\_mileage\_rate' will be implemented as a single rate for all rate buckets. An issue is added at the end of the document for later resolution as to whether there is an Enterprise requirement for individual specification for each rate bucket (hourly, daily, weekly and monthly).
2. Grayed-out rows will not be used for Iteration 2 and 3.
3. For all groupings of charges in the following table, a field is mandatory as noted only when the count field ('Number of Records') is greater than 0.
4. Group the vehicle exchanges independently of vehicle rates. Client application is expected to create a rate structure for each vehicle movement.

Charge Engine Input Parameters - Version : 01.00				Technical		Source of Data
Input Parameter	Notes	FML Field Name		Type	Size	
Standard Header	The content of this header will be used for debugging, user test support, performance monitoring, tuning and error logging	refer to standard header document for layout and population rules	Mandatory			All Clients
View Version String	Identification string for this TUX server	FN_BENG_VIEW_VERSION	Optional	string	100	Tux View
call_mode	Call Mode - Indicates what mode the engine is to execute in: RS - Reservation, CO - Pick-up, CI - Return, AR - Amend Rental, AI - Amend Invoice	FN_BENG_CALL_MODE	Mandatory	string	3	Client App
rental_type	Replacement rental. Domain values: 'I', 'D', 'B', 'F'	FN_BENG_TRANSACTION_TYPE	Optional	char	1	Client App
res_date	Reservation date	FN_BENG_RES_DATE	Optional	string	13	Client App
co_date	Pick-up Date	FN_BENG_CO_DATE	Mandatory	string	13	Client App
co_cry	Pick-up Country	FN_BENG_CO_CRY	Mandatory	string	3	Client App

Charge Engine Input Parameters - Version : 01.00 - Cont.				Technical		Source of Data
Input Parameter	Notes	FML Field Name		Type	Size	
co_curr	Pick-up Currency Code	FN_BENG_CO_CURR	Optional	string	4	Client App
co_stn_id	Pick-up Station ID (Branch)	FN_BENG_CO_STN_ID	Mandatory	string	11	Client App
co_counter_id	Counter id at station. station may have more than one counter	FN_BENG_CO_COUNTER_ID	Optional	long	4	N/A
co_state_cd	State code (ie. FL) for CO station	FN_BENG_CO_STATE_CD	Mandatory	string	3	Client App
ci_date	Return Date	FN_BENG_CI_DATE	Mandatory	string	13	Client App
ci_curr	Return Currency Code (required for fuel charge)	FN_BENG_CI_CURR	Optional	string	4	Client App
ci_stn_id	Return Station Id	FN_BENG_CI_STN_ID	Mandatory	string	11	Client App
Recalc_unit_flag	When set to 'N', CE will charge units as received. Default is 'Y' - recalculate and optimize	FN_BENG_RECALC_UNIT_FLAG	Optional	char	1	Client App
billing_cycle	'C'=Calendar, 'H'=24-Hour - It's a mandatory parameter if the recalc flag is set to 'Y'	FN_BENG_BILLING_CYCLE	Optional	char	1	Client App
grace_period	Grace period in minutes	FN_BENG_GRACE_PERIOD	Optional	long	4	Client App
earliest_co_dow	Earliest day of the week for Pickup	FN_BENG_EARLIEST_CO_DOW	Optional	long	4	Rate Engine
latest_ci_dow	Latest day of week for return	FN_BENG_LATEST_CI_DOW	Optional	long	4	Rate Engine
rental_duration	Total Rental Duration in Days.	FN_BENG_RENTAL_DURATION	Optional	long	4	Rate Engine
voucher_days	For package rates this field indicates the number of days covered by the voucher (non-zero for PKG)	FN_BENG_VOUCHER_DAYS	Optional	long	4	N/A
con_id	Contract Id	FN_BENG_CON_ID	Optional	long	4	Client App
incl_flag	Tax Inclusive Flag	FN_BENG_INCL_FLAG	Optional	char	1	Rate Engine
srchg_incl_flag	Surcharge Inclusive Flag	FN_BENG_SRCHG_INCL_FLAG	Optional	char	1	Rate Engine
tax_exempt_flag	Tax Exemption flag	FN_BENG_TAX_EXEMPT_FLAG	Optional	char	1	Client App
zip_code	Zip Code of Renter - Required for SOME local surcharge exemptions	FN_BENG_ZIP_CODE	Optional	long	4	Client App
waive_arpt_fee	(Y)=Don't charge airport concession fee	FN_BENG_WAIVE_ARPT_FEE	Optional	char	1	Rate Engine
walking_flag	Pass-through flag for surcharge engine	FN_BENG_WALKING_FLAG	Optional	char	1	Client App
pst_to_ba_flag	Y=PST tax is prepaid. N otherwise	FN_BENG_PST_TO_BA_FLG	Optional	char	1	N/A
gst_to_ba_flag	Y=GST tax is prepaid. N otherwise	FN_BENG_GST_TO_BA_FLG	Optional	char	1	N/A
drop_chgs_to_ba_flg	Y=Drop charges are prepaid. N otherwise	FN_BENG_DROP_CHGS_TO_BA_FLG	Optional	char	1	N/A
one_way_tariff	One way tariff / Drop charges flat amount	FN_BENG_ONE_WAY_TARIFF	Optional	double	8	Rate Engine

Charge Engine Input Parameters - Version - 01.00 - Cont.				Technical		Source of Data
Input Parameter	Notes	FML Field Name		Type	Size	
num_vhcl	One record per vehicle exchange (1 to 10)	FN_BENG_NUM_VHCL	Optional	long	4	Client App
Calc_mode[10]	Gasoline Calculation Method: 'R' - (Rate) - FSC 'T' - 'R' - calculate based on tank est 'C' - calculate based on rflg_cost 'Q' - calculate based on rflg_qty 'M' - calculate based on odometer readings 'U' - calculate using rflg_qty & rflg_cost	FN_BENG_CALC_MODE	Optional	char	1	Client App
Vhcl_unit_nbr[10]	Vehicle Unit Number	FN_BENG_VHCL_UNIT_NBR	Optional	long	4	Client App
Vhcl_class[10]	Vehicle Class Code	FN_BENG_VHCL_CLASS	Optional	string	9	Client App
Vhcl_class_sfx[10]	Vehicle Class Suffix	FN_BENG_VHCL_CLASS_SFX	Optional	string	5	Client App
Vhcl_own_state[10]	State of Vehicle Registration	FN_BENG_VHCL_OWN_STATE	Optional	string	3	Client App
Vhcl_make[10]	Make of the vehicle	FN_BENG_VHCL_MAKE	Optional	string	9	Client App
Vhcl_model[10]	Model of the vehicle	FN_BENG_VHCL_MODEL	Optional	string	16	Client App
Vhcl_wt[10]	Vehicle Weight in tons	FN_BENG_VHCL_WEIGHT	Optional	double	8	Client App
Vhcl_price[10]	Vehicle Price	FN_BENG_VHCL_PRICE	Optional	double	8	Client App
Total_annual_VLF[10]	Annual Vehicle License Fee	FN_BENG_ANNUAL_VLF_FEE	Optional	double	8	Client App
accumulated_VLF[10]	Accumulated Vehicle License Fee (Up-to-date)	FN_BENG_ACC_VLF_FEE	Optional	double	8	Client App
Vhcl_reg_exp_dt[10]	Vehicle Registration Expiration date	FN_BENG_REG_EXP_DT	Optional	string	9	Client App
Vhcl_type[10]	Vehicle Type, CR=Car, TR=Truck	FN_BENG_VHCL_TYPE	Optional	string	3	Client App
Vhcl_reg_cry[10]	Vehicle Registration Country	FN_BENG_REG_CRY	Optional	string	3	Client App
co_odmtr[10]	Check Out Odometer	FN_BENG_CO_ODMTR	Optional	long	4	Client App
ci_odmtr[10]	Check In Odometer	FN_BENG_CI_ODMTR	Optional	long	4	Client App
Tank_est[10]	Tank Estimate (on return) in Gals	FN_BENG_TANK_EST	Optional	long	4	N/A
Fuel_out[10]	Tank Estimate (on pickup) in Gals	FN_BENG_FUEL_OUT	Optional	long	4	N/A
rflg_qty[10]	Refuel Quantity	FN_BENG_RFLG_QTY	Optional	long	4	Client App
rflg_cost[10]	Refuel Cost	FN_BENG_RFLG_COST	Optional	double	8	Client App
rflg_payment_type[10]	Refuel Payment Type 'E' - prepaid 'P' - postpaid	FN_BENG_RFLG_PAY_TYPE	Optional	char	1	Client App
Fuel_prc_type[10]	VRS Refueling Price Type	FN_BENG_FUEL_PRC_TYP	Optional	char	1	N/A
refuel_code[10]	Contract Fuel Option refuel code	FN_BENG_REFUEL_CODE	Optional	string	7	N/A
refuel_type[10]	Contract Fuel Type (C, G, R, @)	FN_BENG_REFUEL_TYPE	Optional	char	1	N/A
fuel_incl[10]	Fuel is included in rates, usually in PKG products	FN_BENG_FUEL_INCL	Optional	char	1	Rate Engine
fuel_unblid_rent_rt[10]	The amount for full tank of gas to back out of the T&M rate	FN_BENG_FUEL_UNBLD_RENT_RT	Optional	double	8	Rate Engine
vhcl_xchg_dt	Vehicle Exchange Date	FN_BENG_VHCL_XCHG_DT	Optional	string	13	Client App

Charge Engine Input Parameters - Version : 01.00 - Cont.				Technical		Source of Data
Input Parameter	Notes	FML Field Name		Type	Size	
Time and Mileage data for Basic Rental Charges (Seat Price) - Needed for Time and Mileage data Only (rate_type = T)						
num_rate	One record per product, per rate ( 1 to 10 )	FN_BENG_NUM_RATE	Mandatory	long	4	Client App
rate_type[10]	T)ime & Mileage, V)ariable Rate, or P)ackage	FN_BENG_RATE_TYPE	Mandatory	char	1	Rate Engine
prod_inst_cd[10]	Product instance code	FN_BENG_PROD_INST_ID_CD	Mandatory	string	9	Rate Engine
pin_ver_nbr[10]	Product version number	FN_BENG_PIN_VER_NBR	Optional	long	4	N/A
exc_mileage_rate[10]	Per Mile rate for miles in excess of total allowed free miles	FN_BENG_EXC_MILEAGE_RT	Optional	double	8	Rate Engine
vhcl_id[10]	Same as vehicle unit number. Serves as mechanism to relate this rate structure to a vehicle structure	FN_BENG_RATE_VHCL_ID	Optional	long	4	Client App
eff_start_dt[10]	Starting date/time for this rate instance	FN_BENG_RATE_STRT	Mandatory	string	13	Client App
eff_end_dt[10]	Ending date for this rate instance	FN_BENG_RATE_END	Mandatory	string	13	Client App
tm_hours[10]	Basic Rental Number of hours hourly rate	FN_BENG_TM_HOURS	Optional	long	4	Rate Engine
tm_hourly_rate[10]	Basic Rental Hourly rate for hourly charges	FN_BENG_TM_HOURLY_RT	Optional	double	8	Rate Engine
tm_hourly_miles[10]	Basic Rental Number of free hour at hourly rate	FN_BENG_TM_HOURLY_MILES	Optional	long	4	Rate Engine
tm_days[10]	Basic Rental Number of days daily rate	FN_BENG_TM_DAYS	Optional	long	4	Rate Engine
tm_daily_rate[10]	Basic Rental Daily rate for daily charges	FN_BENG_TM_DAILY_RT	Optional	double	8	Rate Engine
tm_daily_miles[10]	Basic Rental Number of free day at daily rate	FN_BENG_TM_DAILY_MILES	Optional	long	4	Rate Engine
tm_weeks[10]	Basic Rental Number of weeks weekly rate	FN_BENG_TM_WEEKS	Optional	long	4	Rate Engine
tm_weekly_rate[10]	Basic Rental Weekly rate for weekly charges	FN_BENG_TM_WEEKLY_RT	Optional	double	8	Rate Engine
tm_weekly_miles[10]	Basic Rental Number of free week at weekly rate	FN_BENG_TM_WEEKLY_MILES	Optional	long	4	Rate Engine
tm_months[10]	Basic Rental Number of months monthly rate	FN_BENG_TM_MONTHS	Optional	long	4	Rate Engine
tm_monthly_rate[10]	Basic Rental Monthly rate for monthly charges	FN_BENG_TM_MONTHLY_RT	Optional	double	8	Rate Engine
tm_monthly_miles[10]	Basic Rental Number of free month at monthly rate	FN_BENG_TM_MONTHLY_MILES	Optional	long	4	Rate Engine
tm_extra_days[10]	Basic Rental Number of "extra" days charged	FN_BENG_TM_EXTRA_DAYS	Optional	long	4	Rate Engine
tm_extra_day_rate[10]	Basic Rental Per day rate for "extra" days	FN_BENG_TM_EXTRA_DAY_RT	Optional	double	8	Rate Engine
tm_extra_day_miles[10]	Basic Rental Number of free day at extra_day rate	FN_BENG_TM_EXTRA_DAY_MILES	Optional	long	4	Rate Engine
tm_extra_hours[10]	Basic Rental Number of "extra" hours charged	FN_BENG_TM_EXTRA_HOURS	Optional	long	4	Rate Engine
tm_extra_hour_rate[10]	Basic Rental Per hour rate for "extra" hours	FN_BENG_TM_EXTRA_HOUR_RT	Optional	double	8	Rate Engine
tm_extra_hour_miles[10]	Basic Rental Number of free hour at extra_hour rate	FN_BENG_TM_EXTRA_HOUR_MILES	Optional	long	4	Rate Engine
Variable Rate data for Basic Rental Charges (Seat Price) - Needed for Variable Rate data Only (rate_type = V)						
var_sun_hours[10]	VAR Rental Number of Sunday hours	FN_BENG_VAR_SUN_HOURS	Optional	long	4	Rate Engine

Charge Engine Input Parameters - Version : 01.00 - Cont.				Technical		Source of Data
Input Parameter	Notes	FML Field Name		Type	Size	
var_sun_hourly_rate[10]	VAR Rental Hourly rate for Sunday hourly charges	FN_BENG_VAR_SUN_HOURLY_RT	Optional	double	8	Rate Engine
var_mon_hours[10]	VAR Rental Number of Monday hours	FN_BENG_VAR_MON_HOURS	Optional	long	4	Rate Engine
var_mon_hourly_rate[10]	VAR Rental Hourly rate for Monday hourly charges	FN_BENG_VAR_MON_HOURLY_RT	Optional	double	8	Rate Engine
var_tue_hours[10]	VAR Rental Number of Tuesday hours	FN_BENG_VAR_TUE_HOURS	Optional	long	4	Rate Engine
var_tue_hourly_rate[10]	VAR Rental Hourly rate for Tuesday hourly charges	FN_BENG_VAR_TUE_HOURLY_RT	Optional	double	8	Rate Engine
var_wed_hours[10]	VAR Rental Number of Wednesday hours	FN_BENG_VAR_WED_HOURS	Optional	long	4	Rate Engine
var_wed_hourly_rate[10]	VAR Rental Hourly rate for Wednesday hourly charges	FN_BENG_VAR_WED_HOURLY_RT	Optional	double	8	Rate Engine
var_thu_hours[10]	VAR Rental Number of Thursday hours	FN_BENG_VAR_THU_HOURS	Optional	long	4	Rate Engine
var_thu_hourly_rate[10]	VAR Rental Hourly rate for Thursday hourly charges	FN_BENG_VAR_THU_HOURLY_RT	Optional	double	8	Rate Engine
var_fri_hours[10]	VAR Rental Number of Friday hours	FN_BENG_VAR_FRI_HOURS	Optional	long	4	Rate Engine
var_fri_hourly_rate[10]	VAR Rental Hourly rate for Friday hourly charges	FN_BENG_VAR_FRI_HOURLY_RT	Optional	double	8	Rate Engine
var_sat_hours[10]	VAR Rental Number of Saturday hours	FN_BENG_VAR_SAT_HOURS	Optional	long	4	Rate Engine
var_sat_hourly_rate[10]	VAR Rental Hourly rate for Saturday hourly charges	FN_BENG_VAR_SAT_HOURLY_RT	Optional	double	8	Rate Engine
var_sun_days[10]	VAR Rental Number of Sunday days	FN_BENG_VAR_SUN_DAYS	Optional	long	4	Rate Engine
var_sun_daily_rate[10]	VAR Rental Daily rate for Sunday Daily charges	FN_BENG_VAR_SUN_DAILY_RT	Optional	double	2	Rate Engine
var_mon_days[10]	VAR Rental Number of Monday days	FN_BENG_VAR_MON_DAYS	Optional	long	4	Rate Engine
var_mon_daily_rate[10]	VAR Rental Daily rate for Monday Daily charges	FN_BENG_VAR_MON_DAILY_RT	Optional	double	8	Rate Engine
var_tue_days[10]	VAR Rental Number of Tuesday days	FN_BENG_VAR_TUE_DAYS	Optional	long	4	Rate Engine
var_tue_daily_rate[10]	VAR Rental Daily rate for Tuesday Daily charges	FN_BENG_VAR_TUE_DAILY_RT	Optional	double	8	Rate Engine
var_wed_days[10]	VAR Rental Number of Wednesday days	FN_BENG_VAR_WED_DAYS	Optional	long	4	Rate Engine
var_wed_daily_rate[10]	VAR Rental Daily rate for Wednesday Daily charges	FN_BENG_VAR_WED_DAILY_RT	Optional	double	8	Rate Engine
var_thu_days[10]	VAR Rental Number of Thursday days	FN_BENG_VAR_THU_DAYS	Optional	long	4	Rate Engine
var_thu_daily_rate[10]	VAR Rental Daily rate for Thursday Daily charges	FN_BENG_VAR_THU_DAILY_RT	Optional	double	8	Rate Engine
var_fri_days[10]	VAR Rental Number of Friday days	FN_BENG_VAR_FRI_DAYS	Optional	long	4	Rate Engine
var_fri_daily_rate[10]	VAR Rental Daily rate for Friday Daily charges	FN_BENG_VAR_FRI_DAILY_RT	Optional	double	2	Rate Engine
var_sat_days[10]	VAR Rental Number of Saturday days	FN_BENG_VAR_SAT_DAYS	Optional	long	4	Rate Engine
var_sat_daily_rate[10]	VAR Rental Daily rate for Saturday Daily charges	FN_BENG_VAR_SAT_DAILY_RT	Optional	double	8	Rate Engine
var_weeks[10]	VAR Rental Number of weeks	FN_BENG_VAR_WEEKS	Optional	long	4	Rate Engine
var_weekly_rate[10]	VAR Rental Weekly rate for weekly charges	FN_BENG_VAR_WEEKLY_RT	Optional	double	8	Rate Engine
var_months[12]	VAR Rental Number of months	FN_BENG_VAR_MONTHS	Optional	long	4	Rate Engine

**Charge Engine Input Parameters - Version 01.00 - Cont.**

Input Parameter	Notes	FML Field Name		Technical Type	Size	Source of Data
var_monthly_rate[10]	VAR Rate, Monthly rate for monthly charges	FN_BENG_VAR_MONTHLY_RT	Optional	double	8	Rate Engine
var_hourly_miles[10]	Number of free hour at hourly rate	FN_BENG_VAR_HOURLY_MILES	Optional	double	8	Rate Engine
var_daily_miles[10]	Number of free day at daily rate	FN_BENG_VAR_DAILY_MILES	Optional	double	8	Rate Engine
var_weekly_miles[10]	Number of free week at weekly rate	FN_BENG_VAR_WEEKLY_MILES	Optional	double	8	Rate Engine
var_monthly_miles[10]	Number of free month at monthly rate	FN_BENG_VAR_MONTHLY_MILES	Optional	double	8	Rate Engine

**Package Rate data for Basic Rental Charges (Seat Price) - Needed for Package Rate data Only (rate\_type = 'P')**

PKG_base_rate[10]	The Package Base Rate	FN_BENG_PKG_BASE_RT	Optional	double	8	Rate Engine
PKG_base_duration[10]	Number of days of base package duration	FN_BENG_PKG_BASE_DURATION	Optional	long	4	Rate Engine
PKG_extra_hours[10]	Number of Extra Hours used	FN_BENG_PKG_EXTRA_HOURS	Optional	long	4	Rate Engine
PKG_extra_hour_rate[10]	Extra Hour Rate	FN_BENG_PKG_EXTRA_HOUR_RT	Optional	double	8	Rate Engine
PKG_extra_days[10]	Number of Extra Days used after the Plus Days	FN_BENG_PKG_EXTRA_DAYS	Optional	long	4	Rate Engine
PKG_extra_day_rate[10]	Extra Day Rate	FN_BENG_PKG_EXTRA_DAY_RT	Optional	double	8	Rate Engine
PKG_extra_weeks[10]	Number of Extra Weeks used	FN_BENG_PKG_EXTRA_WEEKS	Optional	long	4	Rate Engine
PKG_extra_week_rate[10]	Extra Week Rate	FN_BENG_PKG_EXTRA_WEEK_RT	Optional	double	8	Rate Engine
PKG_free_miles[10]	Free Miles for the Voucher Duration	FN_BENG_PKG_FREE_MILES	Optional	long	4	Rate Engine
PKG_upgrade_rate[10]	Upgrade Rate for the Package Duration	FN_BENG_PKG_UPGRADE_RT	Optional	double	8	Rate Engine
PKG_extn_hours[10]	Number of hours of package extension	FN_BENG_PKG_EXTN_HOURS	Optional	long	4	Rate Engine
PKG_extn_hour_rate[10]	Hourly rate for package extensions	FN_BENG_PKG_EXTN_HOUR_RT	Optional	double	8	Rate Engine
PKG_extn_days[10]	Number of days of package extension	FN_BENG_PKG_EXTN_DAYS	Optional	long	4	Rate Engine
PKG_extn_day_rate[10]	daily rate for package extension	FN_BENG_PKG_EXTN_DAY_RT	Optional	double	8	Rate Engine
PKG_extn_weeks[10]	# weeks package extension	FN_BENG_PKG_EXTN_WEEKS	Optional	long	4	Rate Engine
PKG_extn_week_rate[10]	weekly rate for package extension	FN_BENG_PKG_EXTN_WEEK_RT	Optional	double	8	Rate Engine
PKG_extn_free_miles[10]	Free Miles for the Extension	FN_BENG_PKG_EXTN_FREE_MILES	Optional	long	4	Rate Engine
PKG_free_hourly_miles[10]	Free hourly package miles	FN_BENG_PKG_FREE_HOURLY_MILES	Optional	long	4	Rate Engine
PKG_free_daily_miles[10]	Free daily package miles	FN_BENG_PKG_FREE_DAILY_MILES	Optional	long	4	Rate Engine
PKG_free_weekly_miles[10]	Free weekly package miles	FN_BENG_PKG_FREE_WEEKLY_MILES	Optional	long	4	Rate Engine

num Equip	Number of EQP records to process (0 to 16)	FN_BENG_NUM_SPC_EQ_ITEMS	Optional	long	4	EQP Engine
Equipment ID[16]	Equipment Identifier	FN_BENG_EQP_SPCL_EQ_ID	Mandatory	string	4	EQP Engine
Item Qty[16]	Number of Equipment	FN_BENG_EQP_SPCL_EQ_QTY	Mandatory	long	4	EQP Engine
Equipment Description[16]	Line Item Description	FN_BENG_EQP_SPCL_EQ_DESC	Optional	string	36	EQP Engine
Comm. Device Flag[10]	Communications Device Flag	FN_BENG_EQP_COMM_DVC_FLG	Optional	char	1	EQP Engine
Rental Charge Type[16]	Assigned Charge Type	FN_BENG_EQP_RCT_CHG_TYP	Mandatory	string	6	EQP Engine
Rental Amount[16]	Per rental amount	FN_BENG_EQP_SPCL_EQ_RT	Optional	double	8	EQP Engine
Rental Count[16]	Per rental unit (always equal to 1)	FN_BENG_EQP_SPCL_EQ_CNT	Optional	long	4	EQP Engine
Replacement Amt[16]	Replacement amount for lost equipment	FN_BENG_EQP_REPL_AMT	Optional	double	8	EQP Engine

Charge Engine Input Parameters - Version: 01.00 - Cont.				Technical		Source of Data
Input Parameter	Notes	FML Field Name		Type	Size	
Replacement flag[16]	if 'Y' create active line for replace amount	FN_BENG_EQP_CHGS_REPL_FLAG	Optional	char	1	Client App
Hourly Rental Amount[16]	Hourly rate	FN_BENG_EQP_SPCL_EQP_HR_RT	Optional	double	8	EQP Engine
Hourly Count[16]	Number of Hours	FN_BENG_EQP_SPCL_EQP_HOURS	Optional	long	4	EQP Engine
Daily Rental Amount[16]	Daily Rate	FN_BENG_EQP_SPCL_EQP_DY_RT	Optional	double	8	EQP Engine
Daily Count[16]	Number of days	FN_BENG_EQP_SPCL_EQP_DAYS	Optional	long	4	EQP Engine
Weekly Rental Amount[16]	Weekly rate	FN_BENG_EQP_SPCL_EQP_WK_RT	Optional	double	8	EQP Engine
Weekly Count[16]	Number of weeks	FN_BENG_EQP_SPCL_EQP_WEEKS	Optional	long	4	EQP Engine
Monthly Rental Amount[16]	Monthly rate	FN_BENG_EQP_SPCL_EQP_MO_RT	Optional	double	8	EQP Engine
Monthly Count[16]	Number of months	FN_BENG_EQP_SPCL_EQP_MONTHS	Optional	long	4	EQP Engine
Max Rental Amount[16]	Maximum EQP charge for the rental	FN_BENG_EQP_MAX_RNT_AMT	Optional	double	8	EQP Engine
Inclusive Flag[16]	Indicates that value is bundled in T&M rate	FN_BENG_EQP_SPCL_EQP_INCL	Optional	char	1	EQP Engine
Participation Flag[16]	Can be charged	FN_BENG_EQP_SPCL_EQP_PART	Optional	char	1	EQP Engine
Unbundled Amount[16]	Daily amount for included Equipment	FN_BENG_EQP_UNBLD_DY_RT	Optional	double	8	EQP Engine
Equipment Start Date[16]	Start date for equipment	FN_BENG_EQP_ST_DT	Mandatory	string	13	Client App
Equipment End Date[16]	End date for equipment	FN_BENG_EQP_END_DT	Mandatory	string	13	Client App
del_unit_type_in	Delivery In Charge Unit Type	FN_BENG_DEL_UNIT_TYPE_IN	Optional	string	4	Del/Col Engine
del_nbr_units	Delivery Charge Units - Required if there is to be a delivery charge	FN_BENG_DEL_NBR_UNITS	Optional	long	4	Del/Col Engine
del_comb_flag	Delivery Combination Flag - Required if there is to be a delivery charge	FN_BENG_DEL_COMB_FLAG	Optional	char	1	Del/Col Engine
del_free_dist_in	Delivery In Free Units - Required if there is to be a delivery charge and del_comb_flag = "I"	FN_BENG_DEL_FREE_DIST_IN	Optional	long	4	Del/Col Engine
del_fixed_amt_in	Delivery In Fixed Amount - Required if there is to be a delivery charge and del_comb_flag = "I"	FN_BENG_DEL_FIXED_AMT_IN	Optional	double	8	Del/Col Engine
del_incl_units_in	Delivery In Included Units - Required if there is to be a delivery charge and del_comb_flag = "I"	FN_BENG_DEL_INCL_UNITS_IN	Optional	long	4	Del/Col Engine
del_addl_amt_in	Delivery In Additional Charge Rate - Required if there is to be a delivery charge and del_comb_flag = "I"	FN_BENG_DEL_ADDL_AMT_IN	Optional	double	8	Del/Col Engine
del_free_dist_out	Delivery Out Free Units - Required if there is to be a delivery charge and del_comb_flag = "O"	FN_BENG_DEL_FREE_DIST_OUT	Optional	long	4	Del/Col Engine
del_fixed_amt_out	Delivery Out Fixed Amount - Required if there is to be a delivery charge and del_comb_flag = "O"	FN_BENG_DEL_FIXED_AMT_OUT	Optional	double	8	Del/Col Engine
del_unit_type_out	Delivery Out Charge Unit Type - Required if there is to be a delivery charge and del_comb_flag = "O"	FN_BENG_DEL_UNIT_TYPE_OUT	Optional	string	4	Del/Col Engine



Charge Engine Input Parameters - Version: 01.00 - Cont.						Technical		Source of Data
Input Parameter	Notes	FML Field Name		Type	Size			
del_incl_units_out	Delivery Out Included Units - Required if there is to be a delivery charge and col_comb_flag = 'O'.	FN_BENG_DEL_INCL_UNITS_OUT	Optional	long	4			De Col Engine
del_addl_amt_out	Delivery Out Additional Charge Rate - Required if there is to be a delivery charge and col_comb_flag = 'O'.	FN_BENG_DEL_ADDL_AMT_OUT	Optional	double	8			De Col Engine
col_nbr_units	Collection Charge Units - Required if there is to be a collection charge.	FN_BENG_COL_NBR_UNITS	Optional	long	4			De Col Engine
col_comb_flag	Collection Combination Flag - Required if there is to be a collection charge.	FN_BENG_COL_COMB_FLAG	Optional	char	1			De Col Engine
col_free_dist_in	Collection In Free Units - Required if there is to be a collection charge and col_comb_flag = 'I'.	FN_BENG_COL_FREE_DIST_IN	Optional	long	4			De Col Engine
col_fixed_amt_in	Collection In Fixed Amount - Required if there is to be a collection charge and col_comb_flag = 'I'.	FN_BENG_COL_FIXED_AMT_IN	Optional	double	8			De Col Engine
col_unit_type_in	Collection In Charge Unit Type - Required if there is to be a collection charge and col_comb_flag = 'I'.	FN_BENG_COL_UNIT_TYPE_IN	Optional	string	4			De Col Engine
col_incl_units_in	Collection In Included Units - Required if there is to be a collection charge and col_comb_flag = 'I'.	FN_BENG_COL_INCL_UNITS_IN	Optional	long	4			De Col Engine
col_addl_amt_in	Collection In Additional Charge Rate - Required if there is to be a collection charge and col_comb_flag = 'I'.	FN_BENG_COL_ADDL_AMT_IN	Optional	double	8			De Col Engine
col_free_dist_out	Collection Out Free Units - Required if there is to be a collection charge and col_comb_flag = 'O'.	FN_BENG_COL_FREE_DIST_OUT	Optional	long	4			De Col Engine
col_fixed_amt_out	Collection Out Fixed Amount - Required if there is to be a collection charge and col_comb_flag = 'O'.	FN_BENG_COL_FIXED_AMT_OUT	Optional	double	8			De Col Engine
col_unit_type_out	Collection Out Charge Unit Type - Required if there is to be a collection charge and col_comb_flag = 'O'.	FN_BENG_COL_UNIT_TYPE_OUT	Optional	string	4			De Col Engine
col_incl_units_out	Collection Out Included Units - Required if there is to be a collection charge and col_comb_flag = 'O'.	FN_BENG_COL_INCL_UNITS_OUT	Optional	long	4			De Col Engine
col_addl_amt_out	Collection Out Additional Charge Rate - Required if there is to be a collection charge and col_comb_flag = 'O'.	FN_BENG_COL_ADDL_AMT_OUT	Optional	double	8			De Col Engine

**Charge Engine Input Parameters - Version : 01.00 - Cont.**

Input Parameter	Notes	FML Field Name		Technical Type	Size	Source of Data
num_insurance	Number of INS records to process (0 to 16)	FN_BENG_NUM_INS_ITEMS	Optional	long	4	INS Engine
Excess Deposit[16]	Deposit Amount, if required	FN_BENG_INS_EXCS_DPST	Optional	double	8	INS Engine
Daily Rental Amount[16]	Daily Rate	FN_BENG_INS_DY_RT	Optional	double	8	INS Engine
Daily Count[16]	Number of days	FN_BENG_INS_DAYS	Optional	long	4	INS Engine
Weekly Rental Amount[16]	Weekly rate	FN_BENG_INS_WK_RT	Optional	double	8	INS Engine
Weekly Count[16]	Number of weeks	FN_BENG_INS_WEEKS	Optional	long	4	INS Engine
Monthly Rental Amount[16]	Monthly rate	FN_BENG_INS_MO_RT	Optional	double	8	INS Engine
Monthly Count[16]	Number of months	FN_BENG_INS_MONTHS	Optional	long	4	INS Engine
RCT Charge Type[16]	Ins Charge type	FN_BENG_INS_RCT_CHG_TYP	Mandatory	char	6	INS Engine
Insurance Type ID[16]	Insurance Type ID such as PAI	FN_BENG_INS_INS_TYP_ID	Mandatory	char	9	INS Engine
Insurance Description[16]	Textual Description	FN_BENG_INS_INS_TYP_DESC	Optional	char	36	INS Engine
Applicability Status[16]	I'ncluded, 'M'andatory, 'O'ptional, 'D'o not Offer	FN_BENG_INS_APPL_STATUS	Mandatory	char	1	INS Engine
Unbundled Amount[16]	Daily amount for included Coverage	FN_BENG_INS_UNBLD_DY_RT	Optional	double	8	INS Engine
Threshold_days	Number of initial days before staggered rates take effect	FN_BENG_INS_THRESHOLD	Optional	long	4	INS Engine
Nbr_stg_days[16]	Number of staggered days	FN_BENG_INS_NBR_STG_DAYS	Optional	long	4	INS Engine
Stg_prm_amt[16]	Staggered premium amount	FN_BENG_INS_STG_RT	Optional	double	8	INS Engine
Insurance Start Date[16]	Insurance start date (YYYYMMDDHHMM)	FN_BENG_INS_ST_DT	Mandatory	string	13	Client App
Insurance End Date[16]	Insurance end date (YYYYMMDDHHMM)	FN_BENG_INS_END_DT	Mandatory	string	13	Client App
num_ancly	Number of Ancillary records to process (0 to 16)	FN_BENG_NUM_CHG_ITEMS	Optional	long	4	Ancillary
ancly_id[16]	Charge Identifier	FN_BENG_ANCLY_CHG_ID	Mandatory	long	4	Ancillary
ancly_desc[16]	Charge Description	FN_BENG_ANCLY_CHG_DESC	Optional	string	36	Ancillary
ancly_amt[16]	Amount to charge for this item	FN_BENG_ANCLY_CHG_AMT	Mandatory	double	8	Ancillary
curr_cd[16]	Currency code ( USD, CAD, etc...)	FN_BENG_ANCLY_CURR_CD	Optional	string	4	Ancillary
rcd_chg_typ[16]	Charge type	FN_BENG_ANCLY_RCT_CHG_TYP	Mandatory	string	6	Ancillary
chg_unit_typ[16]	Unit type (D=per day,R=rental,C=%-based)	FN_BENG_ANCLY_CHG_UNIT_TYP	Mandatory	char	1	Ancillary
ancly_start_dt[16]	Start date (YYYYMMDDHHMM)	FN_BENG_ANCLY_START_DT	Mandatory	string	13	Client App
ancly_end_dt[16]	End date (YYYYMMDDHHMM)	FN_BENG_ANCLY_END_DT	Mandatory	string	13	Client App
chrg_drtn[16]	Duration - required for per day	FN_BENG_ANCLY_CHRG_DRTN	Optional	long	4	Ancillary
disc_pctage	Discount Percentage if applicable or 0	FN_BENG_DISC_PCTAGE	Optional	double	8	Rate Engine
disc_appl_flag	How discount is to be applied (I,T&V,BR)	FN_BENG_DISC_APPL_FLAG	Optional	char	1	Rate Engine
coupon_id1	Coupon id for 1st coupon	FN_BENG_COUPON_ID1	Optional	string	11	Client App
coupon_cnt1	Coupon count for 1st coupon	FN_BENG_COUPON_CNT1	Optional	long	4	Client App
coupon_id2	Coupon id for 2nd coupon	FN_BENG_COUPON_ID2	Optional	string	11	Client App
coupon_cnt2	Coupon count for 2nd coupon	FN_BENG_COUPON_CNT2	Optional	long	4	Client App
coupon_id3	Coupon id for 3rd coupon	FN_BENG_COUPON_ID3	Optional	string	11	Client App
coupon_cnt3	Coupon count for 3rd coupon	FN_BENG_COUPON_CNT3	Optional	long	4	Client App
loc_diff_rt	Location Differential Rate	FN_BENG_LOC_DIFF_RT	Optional	double	8	Rate Engine
coup_st_dt	Coupon Start Date (YYYYMMDDHHMM)	FN_BENG_COUPON_ST_DT	Optional	string	13	Client App
coup_end_dt	Coupon End Date (YYYYMMDDHHMM)	FN_BENG_COUPON_END_DT	Optional	string	13	Client App

**Charge Engine Input Parameters - Version - 01.00 - Cont**

Input Parameter	Notes	FML Field Name		Technical		Source of Data
				Type	Size	
renter_identifier	Unique identification for the renter	FN_BENG_RENTER_ID	Mandatory	long	4	Client App
num_billto	Count of BILLTO's attached to this renter (0 to 8)	FN_BENG_NUM_BILLTO	Optional	long	1	Client App
billto_identifier[8]	Unique ID for each BILLTO	FN_BENG_BILLTO_ID	Mandatory	long	4	Client App
max_billable[8]	Maximum Billable Amount to this BILLTO	FN_BENG_MAX_CHARGE	Optional	double	2	Client App
max_daily[8]	Maximum Daily amount for this renter	FN_BENG_MAX_DAILY	Optional	double	2	Client App
plus_tax_ind[8]	Behavior for tax charges (I=inclusive, E=exclusive or A=additive)	FN_BENG_PLUS_TAX	Optional	char	1	Client App
plus_srchg_ind[8]	Behavior for surcharges (I=inclusive, E=exclusive or A=additive)	FN_BENG_PLUS_SURCHARGE	Optional	char	1	Client App
num_auth_chgs	Count of authorized charge types (0 to 40)	FN_BENG_NUM_AUTH_CHGS	Optional	long	4	Client App
billto_identifier[40]	Unique ID for the BILLTO assigned to charge type	FN_BENG_BILLTO	Optional	long	4	Client App
Charge_type[40]	VRS Charge type (eg 'C0001' = T&M)	FN_BENG_ACT_CHG_TYP	Optional	string	6	Client App
authorized_amount[40]	Amount BILLTO will pay for that charge type	FN_BENG_AUTH_AMOUNT	Optional	double	8	Client App
authorized_percent[40]	Percent of Charge rate BILLTO will pay	FN_BENG_AUTH_PERCENT	Optional	double	3	Client App
Charge_frequency[40]	Frequency at which authorized amount is applied	FN_BENG_CHARGE_FREQ	Optional	char	1	Client App
auth_start_dt[40]	Authorization start date (YYYYMMDDHHMM)	FN_BENG_AUTH_START_DT	Optional	string	13	Client App
auth_end_dt[40]	Auth end date (YYYYMMDDHHMM)	FN_BENG_AUTH_END_DT	Optional	string	13	Client App
auth_days[40]	Authorized number of days	FN_BENG_AUTH_DAYS	Optional	long	4	Client App

### 3.1.2 Outputs

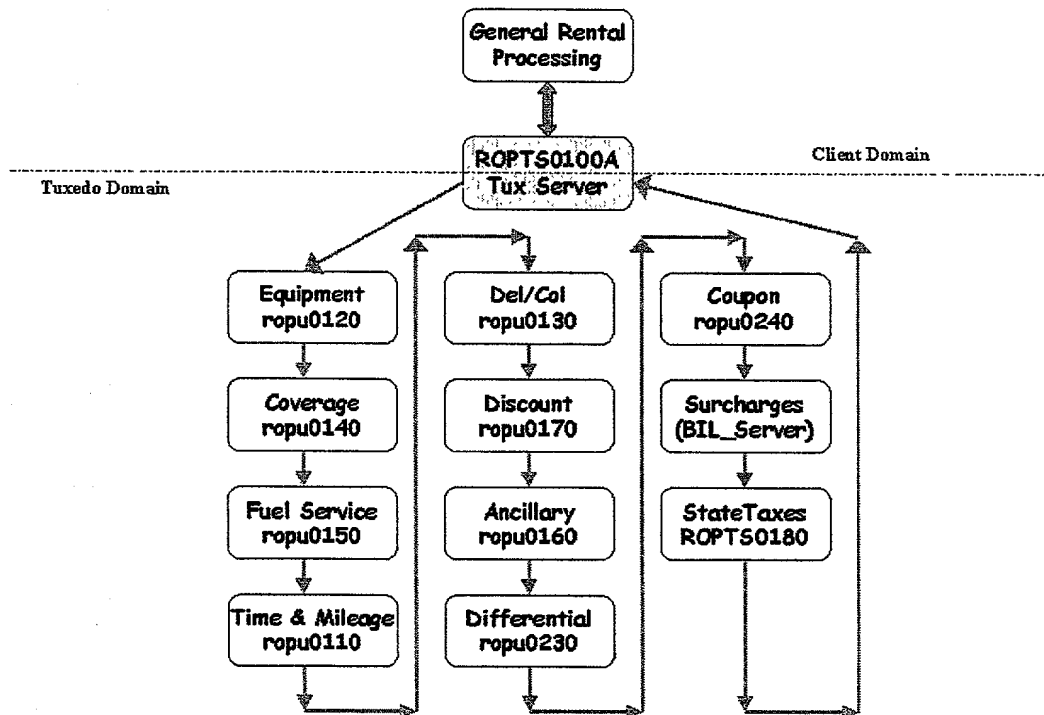
The charge engine inserts all charges into the Tuxedo output buffer and returns to the caller. The created line items will not be directly recorded into the database by the charge engine. It is the calling processes' responsibility to manage the database transaction – the charge engine does no commits or rollbacks. The output buffer is defined below. The items under the "FML field name" column in BOLD are added to the output for possible future extension. Some of those fields have no application at present for this phase of the Enterprise project.

Charge Engine Output (out_rops_bill) - Version 01.00				Technical		Source of Data
Output Parameter	Notes	FML Field Name	Rules	Type	Size	
error_no	Server error Code or 0	FN_BENG_ERR_STATUS	Mandatory	long	4	CC
err_text	Server Error Text	FN_BENG_ERR_MESSAGE	Optional	string	81	CC
sql_error_no	DB Error code as applicable	FN_BENG_SQL_ERR_STATUS	Optional	long	4	CC
sql_error_text	DB Error Text as applicable	FN_BENG_SQL_ERR_MESSAGE	Optional	string	81	CC
Amount	Total Estimated Charges	FN_BENG_AMOUNT	Mandatory	double	8	CC
num_charges (1 - 100)	Number of line items made up of below components	FN_BENG_CHGS_REC_COUNT	Mandatory	long	4	CC
chg_actv[100]	Activity flag - AS,AN,NS,NN	FN_BENG_CHG_ACTY	Mandatory	string	3	CC
chg_amt[100]	Line item Charged Amount	FN_BENG_CHG_AMT	Mandatory	double	8	CC
chg_basis[100]	Basis for percent-based charges	FN_BENG_CHG_BASIS	Optional	double	8	CC
chg_rt[100]	Charge rate	FN_BENG_CHG_RT	Mandatory	double	8	CC
item_qty[100]	Number of items (See Equipment)	FN_BENG_ITEM_QTY	Optional	long	4	CC
chg_unit[100]	Unit Count	FN_BENG_CHG_UNIT	Optional	long	4	CC
In_item_desc[100]	Line item Description #1	FN_BENG_LN_ITEM_DESC	Optional	string	36	CC,SE,TE
In_item_desc2[100]	Line item Description #2	FN_BENG_LN_ITEM_DESC2	Optional	string	36	CC,SE,TE
pcnt_of_chg[100]	Percent factor	FN_BENG_PCNT_OF_CHG	Optional	double	8	CC,SE,TE
rct_chg_typ[100]	Charge Type	FN_BENG_RCT_CHG_TYP	Mandatory	string	6	CC,SE,TE
rut_cd[100]	Per hour,day,week,month charge	FN_BENG_RUT_CD	Mandatory	string	4	CC
txc_strt_dt[100]	Tax/Surcharge start date	FN_BENG_TXC_STRT_DT	Optional	string	9	SE,TE
txc_tc_cd[100]	Tax/Surcharge code	FN_BENG_TXC_TX_CD	Optional	string	16	SE,TE
ts_type_cd[100]	Tax/Surcharge type (ie. OPTL, ARPT)	FN_BENG_TS_TYPE_CD	Optional	string	5	SE,TE
Taxable_ind[100]	Taxable Indicator	FN_BENG_TAXABLE_IND	Mandatory	char	1	TE
inclusive_flg[100]	Inclusive indicator for charge - Y-Incl, N-NotIncl	FN_BENG_INCLUSIVE_FLG	Mandatory	char	1	CC
allocation_ind[100]	Allocation indicator - T-Tour, N-Driver	FN_BENG_ALLOCATION_IND	Mandatory	char	1	CC
bac_acct_id[100]	Business Account Identifier	FN_BENG_BILLTO_ID	Optional	long	4	CA
dvr_dvr_id[100]	Renter Identifier	FN_BENG_RENTER_ID	Optional	long	4	CA
rcc_chg_cat[100]	Charge Category	FN_BENG_CHG_CAT	Optional	string	4	CC
rct_glt_seq[100]	GL Sequence Number	FN_BENG_GLT_SEQ_NBR	Optional	long	4	CC
rcc_chg_seq[100]	Charge Category Sequence	FN_BENG_CHG_CAT_SEQ	Optional	long	4	CC
rct_chg_seq[100]	Charge Type Sequence	FN_BENG_CHG_TYPE_SEQ	Optional	long	4	CC
chg_st_dt[100]	Charge Start Date (YYYYMMDDHHMM)	FN_BENG_CHG_ST_DT	Mandatory	string	13	CC
chg_end_dt[100]	Charge End Date (YYYYMMDDHHMM)	FN_BENG_CHG_END_DT	Mandatory	string	13	CC

**Legend:** CC = Charge Calculation, CA = Charge Allocation, SE = Surcharge Engine, TE = Tax Engine

### 3.1.3 Detailed Process Flow

Once a user's request has been transmitted through the Tuxedo interface, the charge engine driver "ROPTS0100A\_SvcDataAccess" calls the following module in sequence - items which may be bundled into the Time-and-Mileage charge but not priced as a percentage of the T&M, are processed ahead of service module ropu0110.



#### 3.1.3.1 Charge Engine Main Processor (ROPTS0100A\_SvcDataAccess)

Basic logic flow for the Charge Engine Tux server (ROPTS0100A\_SvcDataAccess):

```

Recalculate Units and Optimize based on charge frequencies
WHILE a service module is defined
DO
    Call the service module
    IF the service module fails THEN
        Terminate the whole transaction
        Skip - return error to caller
    END IF
END WHILE
IF all calculations were successfully made THEN
    IF further allocation is needed THEN
        Call allocation engine
    END IF
END IF
Copy results into CE's TUX output for caller's use

```

**Note:** The allocation engine call will be activated in iteration 4.

## 3.1.3.1.1 Equipment Charges (ropu0120)

This service module traverses a caller-supplied linked list of Equipment items and creates the rental and/or replacement charges for each item. On pickup, the charges for each equipment along with a possible replacement cost are computed – the activity code for the replacement line item is 'NS' so it does not figure into the overall calculation but can be displayed to the customer. On return, if the replacement flag is set to 'Y' (FN BENG EQP CHGS REPL FLAG), a single line item with that value is created and any equipment rental value is ignored. Each item in this list is used to retrieve the checkout charge rate and amount for the equipment. These values are then used to create charges for the equipment. If the charge is inclusive, the "back-out logic" is used to reduce the *vehicle rate* by that charge.

```
FOR each basic equipment item specified
  IF replacement flag is set THEN
    Create the replacement charge as an "active-Show" item
  ELSE
    IF rateUnitType is 'T' or 'P' and there are inclusive items THEN
      Unbundle charges from Vehicle Rate and create EQP charges
    ELSE
      IF rental count for this item is non-zero THEN
        Calculate a flat per Rental charge
      ELSE // (no flat amount charge)
        total charges = sum of each rate bucket
        IF total charges > MAX_RNT_AMT and MAX_RNT_AMT is not Zero THEN
          Disregard component charges
          Calculate a flat per Rental charge for MAX_RNT_AMT
        ELSE
          IF the monthly count is non-zero THEN
            Calculate a per month charge
          END IF
          IF the weekly count is non-zero THEN
            Calculate a per week charge
          END IF
          IF the day count is non-zero THEN
            Calculate a per day charge
          END IF
          IF the hour count is non-zero THEN
            Calculate a per hour charge
          END IF
        END IF
      END IF
    END IF
    Create the replacement charge as "not active-Show" item
  END IF
END FOR
```

Refer to the input sub-section for required data on equipment charges.

On exit, the program returns to ROPTS0100A\_SvcDataAccess with a return code and an updated count of the charge line items.

### 3.1.3.1.2 Insurance Charges (ropu0140)

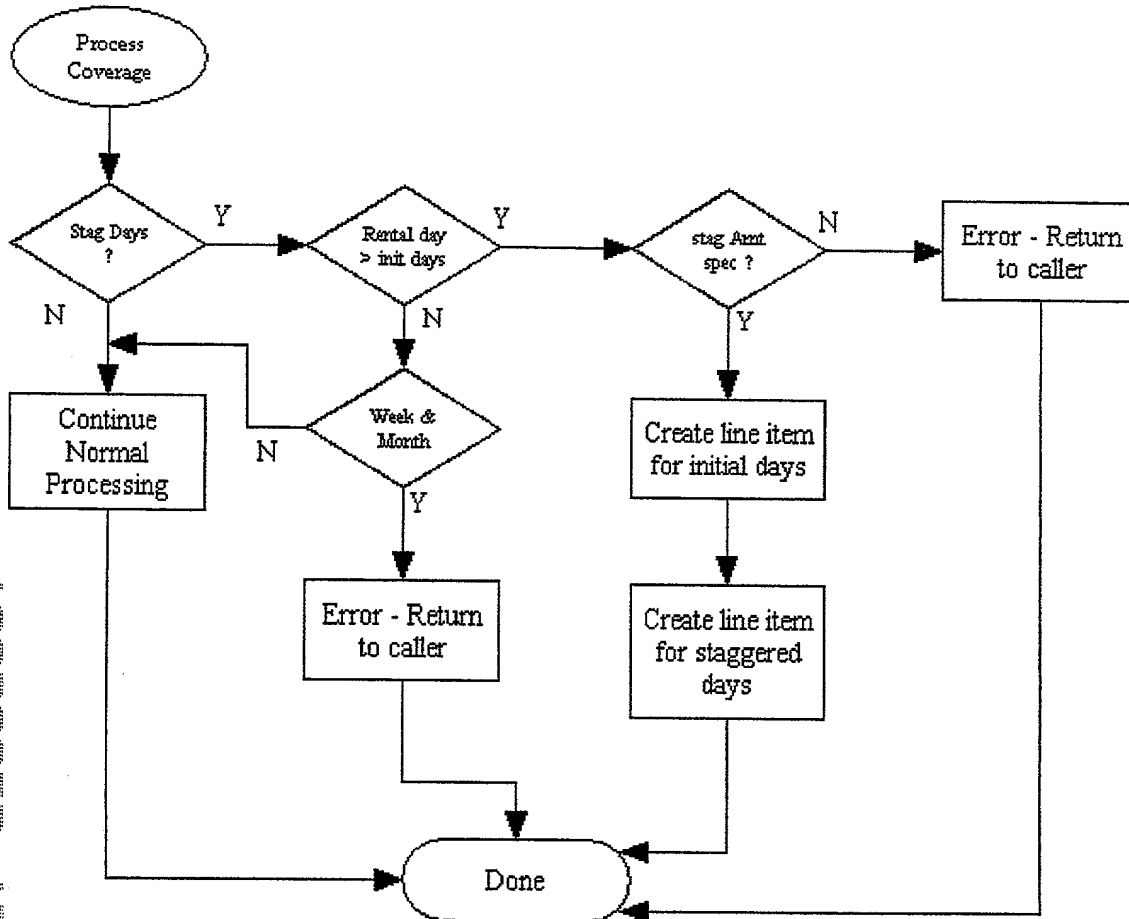
This service module creates a charge item for each item in the Insurance Linked List. These charges may be zero-amount if the rate member of the list item is 0.0. Appropriate changes will be made to support the 'Daily', 'Weekly' and 'Monthly' charge frequency required for ECARS 2.0. There is also a charge for "excess deposit" (amount driver is responsible for before insurance pays out). If the charge is inclusive, the "back-out logic" is used to reduce the T&M value by that charge.

```
FOR each item in the insurance list
DO
  IF rateUnitType is 'T' or 'P' and there are inclusive items THEN
    Unbundle charges from Vehicle Rate and create INS charges
  ELSE
    IF the number of stag days is specified THEN
      See Flow chart below
    END IF
    IF the daily count is non-zero THEN
      Calculate a daily insurance charge
    END IF
    IF the weekly count is non-zero THEN
      Calculate a weekly insurance charge
    END IF
    IF the monthly count is non-zero THEN
      Calculate a monthly insurance charge
    END IF
    Calculate "excess deposit" charge ('NS' activity code)
  END IF
END FOR
```

The following modification will be made to service module ropu0140 to implement staggered rates. Bundled and staggered rates are mutually exclusive and bundled rates take precedence.

Two additional input parameters dealing for staggered rates are added to the charge engine input section. After processing, two lines items for either PAI or PEC coverage types, will be created as described below:

1. Line item #1 is the regular daily amount (**FN\_BENG\_INS\_DY\_RT**) multiplied by the threshold number of days, defined as the number of days that the initial rate is charged. This number is specified in the field **FN\_BENG\_INS\_DAYS**.
2. Line item #2 is the staggered premium amount (**FN\_BENG\_INS\_STG\_RT**) multiplied by the number of staggered days (**FN\_BENG\_INS\_NBR\_STG\_DAYS**). This number defines the number of subsequent days beyond the threshold days.



Assuming a 4-day rental and PAI coverage with threshold days set at 3 days (\$2.00 per day) and 1 staggered day (\$1.00), the Charge Engine will create two line items as follows:

Line #1: PAI: 3 days at \$2.00 = \$6.00	(Day 1, 2 and 3)
Line #2: PAI: 1 day at \$1.00 = \$1.00	(Day 4)
Total	= \$7.00

On exit, the program returns to ROPTS0100A\_SvcDataAccess with a return code and an updated count of the charge line items.

### 3.1.3.1.3 Fuel Charges (ropu0150)

Most of the calculation methods used in VRS will be disabled . The refueling service accepts a refuel cost and quantity (fuel consumed) from the client application and generates a line item for Refueling based on those numbers. A modification to the input section now accepts the fuel payment type output by the Ancillary engine. This field is used to create the refuel line item with the appropriate charge type.

The ability to unbundle fuel price from the vehicle rate will be retained.



For the Enterprise implementation, a new calculation method will be created to accept the unit value (FN\_BENG\_RFLG\_QTY) and the unit cost (FN\_BENG\_RFLG\_COST) from the client application. After design review with the customer on June 6, 2001, it was decided that the fuel\_prcs table will be used to maintain refuel prices. The ancillary charge engine will be used by the client application to retrieve two cost figures (pre-paid and post-paid). Please refer to the design document of the Ancillary service for the interface description. Only one of those figures will be passed to the charge engine depending on user selection. The client application also passes an appropriate unit count (number of gallons/liters) to the charge engine. It also has the option of pre-calculating the total refuel amount, in which case the number of gallons (unit count) passed to the charge engine would be set to 1. In order to cause the refuel line item to be calculated, the client application should also set the calc mode input parameter to 'U' (FN\_BENG\_CALC\_MODE) and FN\_BENG\_RFLG\_PAY\_TYPE to the payment type returned by the Ancillary engine ( F-prepay or P- postpay).

On exit, the program returns to ROPTS0100A\_SvcDataAccess with a return code and an updated count of the charge line items.

#### 3.1.3.1.4 Vehicle Charges/Time & Mileage (ropu0110)

There are three "types" of rate units supported in VRS - Time and Mileage (TM), Packages (PKG) and Variable Rate (VAR). These are mutually exclusive for any rental. For ECARS 2.0, only the TM rate type will be used through iteration 3. Rate types PKG and VAR will be disabled. If the vehicle rate for the rental includes taxes and surcharges, those charges are backed out from the vehicle rates. Government taxes and surcharges are calculated based on the reduced vehicle rate.

For 'Reservation', 'Open Ticket', and 'Modify Ticket' modes, zero duration charges are created for any rate unit bucket for which the duration is zero. For example, if the monthly rate is populated, but the number of months charged at this rate is 0, there will be a charge line item created with its charge unit and the amount fields set to 0. This allows all of the different rate buckets to be displayed on the rental agreement and reservation disclosure screens if the GUI so desires.

Tax-inclusive and surcharge-inclusive rates are indicated via the FN\_BENG\_INCL\_FLAG and the FN\_BENG\_SRCHG\_INCL\_FLAG input parameters respectively.

This module also calculates the mileage cost to be assessed for the rental - If the excess mileage rate input parameter is zero, there will be an UNLIMITED\_MILEAGE charge line item (zero amount) created. Otherwise (excess mileage rate non-zero), there will be a (zero-amount) free miles charge, a (zero-amount) charge for any "extra" free miles (free miles associated with "extra" or "extension" rental periods) and a charge (non-zero) amount) for any mileage above the sum of all "free" miles. Basic flow for the T&M module follows:

```
IF rate type = 'T' (Time and Mileage rate) THEN
  Process Monthly charge if specified
  Process Weekly charge if specified
  Process Daily charge if specified
  Process Hourly charge if specified
```

```
Process Extra-Weeks charge if specified
Process Extra-Day charge if specified
Process Extra-hour charge if specified
IF excess mileage rate is zero (mileage is unlimited) THEN
    create UNLIMITED miles charge
ELSE (mileage is NOT unlimited)
    create FREE miles charge
    create "extra" FREE miles charge
    IF total_miles > allowed free miles THEN
        create excess mileage charge
    END IF
ELSE (not TM)
    error - unknown rate type
END IF
```

For this release of the Enterprise implementation, the mileage allowance is expected for only a single product instance. In future iterations, when repeating groups are introduced for products, this module would have to be modified to take into account differing amount for mileage allowance across all products and generate a charge line accordingly. Rate type 'P' and 'V' will not be supported in VRS until the applicability of those rate types are properly defined for ECARS 2.0.

On exit, the program returns to ROPTS0100A\_SvcDataAccess with a return code and an updated count of the charge line items.

### 3.1.3.1.5 Drop Charges, Delivery and Collection (ropu0130)

#### Drop Charge:

The charge engine creates a line item for this charge type based on the data passed to it. There is not much logic behind it. The only requirement is that the 'one\_way\_tariff' input parameter be non-zero.

This fee may be prepaid when used with a package product and the override flag for drop charge is set as a contractual condition. The charge engine will group this charge together with all other charges that would be allocated to the business account behind the voucher. That charge will be above the value of the voucher used for the rental. For example, if a voucher is worth \$100.00 and there is a \$35.00 prepaid drop fee, the business account for that voucher will be billed \$135.00. Outside of prepaid products, drop charges are treated as any other charge line item. The program flow is shown below:

```
IF one_way_tariff (input parameter) is non-zero THEN
    Create a line item for drop charges
    IF rate unit type is PKG and the fee is prepaid THEN
        Mark the line item so that it will allocated to Tour Operator
    END IF
END IF
```

## Delivery and Collection Charge:

Current logic creates flat amount charge for delivery and collection. The flat amount can include a per unit charge, but will show as a flat amount charge on the RRA\_CHGS list. The flat amount is determined as follows:

There is a flat fee up to some base number of units. For units beyond this base amount, a per-unit charge is applied. The charge amount is the sum of these (flat fee and per unit fee). For unit types other than distance, a flat fee is applied.

Basic logic flow for delivery charge calculation is:

```
IF del_comb_flag is 'Y' or 'N' THEN
    use "in" parameters for delivery charge
ELSE
    use "out" parameters
END IF

IF the delivery charge is a "per distance unit" charge THEN
    IF the units used is more than the free units allowed THEN
        Calculate the additional charge based on distance
        Charge Amount is fixed amount plus additional charge
    END IF
ELSE
    charge amount is passed in (fixed amount)
END IF

IF the charge amount is not zero THEN
    create the delivery charge
END IF
```

Basic logic flow for collection charge calculation is:

```
IF col_comb_flag is 'Y' or 'N' THEN
    use "in" parameters for collection charge
ELSE
    use "out" parameters
END IF

IF the collection charge is a "per distance unit" charge THEN
    IF the units used is more than the free units allowed THEN
        calculate the charge amount based on distance
    END IF
ELSE
    charge amount is passed in (fixed amount)
END IF

IF the charge amount is not zero THEN
    create the collection charge
END IF
```

**This functionality will not be used in Iteration 2 or 3 of the ERAC implementation.**

On exit, the program returns to ROPTS0100A\_SvcDataAccess with a return code and an updated count of the charge line items.

### 3.1.3.1.6 Discount Credits (ropu0170)

The handling of discounts is processed in module ropu0170.pc. Current logic creates a discount line item if the total Basic Rental Charges are non-zero and the 'disc\_pcentage' parameter passed by the caller is non-zero. This charge is created as a percentage of the vehicle rate. The discount will always be applied to the time and mileage charges even when other charges are bundled into the vehicle rate. For future release of ECARS 2.0, a discount applicability flag and a method for denoting whether a charge type is discountable, will be added as an input to the charge engine so that the actual discount may be applied to one of the following charge items:

1. Time only (T)
2. Time and Mileage (M)
3. Total Rental amount for discountable charges before tax (R)

The applicability flag drives the selection of one of the above options. Note that for options 1 and 2, the discountable indicator is not taken into account, as the directives are explicit. When option 3 is selected, the charge engine will calculate the basis for the discount using all charge types (in the current ticket) deemed to be discountable.

Iteration 2 of ECARS 2.0 will apply the discount to the sum of the vehicle rate, mileage and upgrade charges. This will be the default behavior until future iterations when the applicability flag is processed. A DDL change to the RRA\_CHG\_TYPS will be made so that each charge type can be defined as being discountable or not. This service module will take that indicator into account when calculating the cost basis for the discount. Any discount functionality, from a testing perspective, will be deferred to iteration 4.

Current logic flow for discount charge calculation is:

```
IF the discount percentage (input parameter) is non-zero THEN
  Calculate Rental Charges per specified option
  IF total basic rental charges is non-zero THEN
    Create a (percentage) discount charge
  END IF
END IF
```

On exit, the program returns to ROPTS0100A\_SvcDataAccess with a return code and an updated count of the charge line items.

### 3.1.3.1.7 Ancillary Charges (ropu0160)

Ancillary charges are "non-standard" charges that the charge engine generates. The basis or the supported data for those charges does not necessarily come from the rate engine. Currently, there are 5 such charge types defined, the first three of which will be implemented by a new VRS Engine. Calling processes must call the new service before calling the charge engine and copy any returned data into the input structure.

1. After Hours
2. Young Renter Fee
3. Additional Driver
4. Manual or Miscellaneous Charges
5. Customer Satisfaction Credits

The Charge Engine loops through this list and creates a charge for each valid item. This approach was taken to allow additional charges to be identified and added later with minimal impact and interface changes. These charges can be per rental, per day, or percentage-based, driven by the `chg_unit_typ` field of the input structure.

Basic logic flow for allowance charge calculation is:

```
FOR each item in the ancillary charge list
DO
  IF the chg_unit_typ is per rental ('R') THEN
    Create a fixed 'Per Rental' amount charge
  ELSE IF the chg_unit_typ is daily ('D') THEN
    IF the Calc Amount greater than MAXIMUM and MAXIMUM is not Zero THEN
      Disregard the 'Per Day' component
      Create a fixed 'Per Rental' charge using MAXIMUM value
    ELSE
      Create a 'Per Day' charge
    END IF
  ELSE IF the chg_unit_typ is percent ('C') THEN
    Create a 'Percentage-based' charge
  END IF
END FOR
```

Current VRS implementation allows 'Per Rental' charges for 'After Hours' and 'Per Rental' / 'Per Day' for 'Additional Driver' and 'Young Driver'.

On exit, the program returns to ROPTS0100A\_SvcDataAccess with a return code and an updated count of the charge line items.

### 3.1.3.1.8 Location Differential (ropu0230)

This is an output of the rate engine. The Charge engine will create a charge item based on the parameters passed.

Basic logic flow for location differential charge calculation is:

```
IF the differential amount is non-zero THEN
  Create a location differential charge
END IF
```

This functionality may not be used in ECARS 2.0.

On exit, the program returns to ROPTS0100A\_SvcDataAccess with a return code and an updated count of the charge line items.

### 3.1.3.1.9 Coupon Credits (ropu0240)

The Charge engine calls the Coupon Valuation Service passing up to three coupon identifiers as defined in the interface. The Coupon Valuation Service is a library routine (MKTB7020) implemented in the Coupon Design part of VRS. It will return a charge amount for each coupon id, which may be zero. A charge line item is created for each coupon with a non-zero value. There may be a multiplier for each coupon id, in which case the charge would be the total of all coupons with that coupon id. The charge engine creates an adjustment line item if the value of the coupon exceeds the basic rental cost. This item is listed as a negative number and is defined as a forfeited amount.

Similar to discount, the value of the coupon is determined using the effective T&M as the basis in case there are bundled charges.

Basic logic flow for coupon charge calculation is:

```
IF there are any coupon id's passed in THEN
  Calculate the 'minimum-daily' rental amount
  Call coupon valuation service
  FOR each coupon id passed in
    DO
      IF coupon value is non zero THEN
        Add coupon amount to total_coupon_amt
        Create coupon charge (negative amount)
      END IF
    END FOR
  IF (total_coupon_amt > basic_rental_total) THEN
    create coupon adjustment charge (forfeited amount)
  END IF
END IF
```

The following table is required to support the valuation service.

#### COUP\_PROMO\_VALD

##### Columns

COUPON_ID	VARCHAR2(10)	NOT NULL
CPN_CREATE_DT	DATE	DEFAULT SYSDATE NOT NULL
DT_DEPOSIT_ID	NUMBER(1)	DEFAULT 7 NOT NULL
PROM_COUP_IND	VARCHAR2(1)	NOT NULL
BUA_ACCT_ID	NUMBER(8)	
CON_CON_ID	NUMBER(8)	
CPN_CHG_DT	DATE	
CPV_CAPACITY_CONT_FLG	VARCHAR2(1)	DEFAULT 'N'
CPV_COMMENT	VARCHAR2(35)	
CPV_CONT_TRK_LIST_NM	VARCHAR2(15)	
CPV_CUST_VAL_AMT	NUMBER(15,3)	

CPV_EXPIRE_DT	DATE
CPV_MAX_QTY	NUMBER(1)
CPV_NAME	VARCHAR2(35)
CPV_TYPE_CD	VARCHAR2(2) DEFAULT 'UG'
CPV_VALUE_INTNL_AMT	NUMBER(15,3)
CUR_CURR_CD	VARCHAR2(3) DEFAULT 'USD'
GTR_GLT_SEQ	NUMBER(6)
RCT_RRA_CHG_TYP	VARCHAR2(5)
PAPER_ELECT_CD	VARCHAR2(1)

Primary Key  
COUPON\_ID

Indexes

Foreign Keys

CPV\_BUA\_FK (BUA\_ACCT\_ID) REFERENCES BUS\_ACNTS (ACCT\_ID)  
 CPV\_CON\_FK (CON\_CON\_ID) REFERENCES CONS (CON\_ID)  
 CPV\_CUR\_FK (CUR\_CURR\_CD) REFERENCES CURRS (CURR\_CD)  
 CPV\_RCT\_FK (RCT\_RRA\_CHG\_TYP) REFERENCES RRA\_CHG\_TYPS (CHG\_TYP)

Check Constraints

VALID\_RULE625 ( cpv\_capacity\_cont\_flg IN ( 'Y' , 'N' ) )  
 VALID\_RULE624 ( cpv\_type\_cd IN ( 'UG' , 'FD' , 'CO' ) )  
 SYS\_C002570 ( prom\_coup\_ind IN ( 'P' , 'C' ) )

At the charge engine level, the SQL to support coupon valuation using the above table would be as shown below:

```

SELECT cp.cpv_type_cd,
       DECODE(cp.cpv_type_cd, 'UG', 0,
              'FD', (LEAST(
                      ((:basic_rental/:rental_length)*cp.cpv_cust_val_amt),
                      (:lowest_dailyrate*cp.cpv_cust_val_amt))),
              cp.cpv_cust_val_amt) coupon_val,
       cp.coupon_id,
       cp.dt_deposit_id,
       cp.rct_rra_chg_typ,
       cp.cpv_name,
       cp.cpv_comment
FROM VRS.coup_promo_vald cp
WHERE cp.coupon_id in (:coup1_id_val,
                      :coup2_id_val,
                      :coup3_id_val);
  
```

The intent is to disable the coupon valuation service until that part of VRS is fully implemented in ECARS.

On exit, the program returns to ROPTS0100A\_SvcDataAccess with a return code and an updated count of the charge line items.

### 3.1.3.1.10 Surcharges (ropu0220)

Once all the charges for a given rental are created, the surcharge service module (ropu0220) is called to calculate the surcharges, if applicable. A surcharge is calculated for each charge type found but is summarized and grouped by surcharge id so that a single value is returned to the caller program. A more detailed breakdown of surcharges is described in the Surcharge Engine Design document.

Basic flow logic for these surcharges is:

```

Initialize array of surcharge information, one element for each possible surcharge
FOR each charge we have created so far
DO
    Call surcharge tuxedo service to calculate surcharges
    Accumulate surcharge information into local array
END FOR

FOR each item in the surcharge array
DO
    IF the surcharge is a Fixed Amount - 'per Rental' THEN
        Create a flat amount charge for the surcharge (ONCE)
    ELSE IF the surcharge is a Fixed Amount - 'per Day' THEN
        Create a per day charge for the surcharge (ONCE)
    ELSE IF the surcharge is a Percentage of Basic Rental THEN
        Create a percentage-based surcharge
    ELSE
        ERROR - unknown surcharge type
    END IF
    Adjust for MIN and MAX for each created charge line item
END FOR

```

The charge engine interfaces to the surcharge engine via a wrapper program defined as shown below. The formal parameter list has been modified to include certain arguments that must be passed to it for the ECARS 2.0 implementation. No specific use has been defined for the 'walkin\_flg' and the 'waive\_arpt\_fee\_flg', consequently their default value of 'N' will be used.

```

int FindSchgs ( char      *co_cry,          /* Country code */
               char      *co_date,         /* Checkout date */
               char      *ci_date,         /* Check-in date */
               char      *co_stn,          /* Checkout station */
               char      *co_state_cd,     /* State code for pickup branch */
               char      *chg_typ,         /* Charge type */
               double     chg_amt,         /* Charge amount */
               char      *vhcl_cat_cd,     /* Vehicle category */
               char      *vhcl_suffix_cd,  /* Vehicle suffix code */
               long       vhcl_unit_nbr,   /* Vehicle unit number */
               char      *vhcl_own_st,    /* Vehicle Owning State */
               long       zip_cd,          /* Exempted zip code */
               char      tx_exmpt_flg,     /* Tax exempt indicator */
               long       con_id,          /* Contract ID */
               long       rntl_days,       /* Rental duration */
               long       base_days,       /* Base days */
               long       extra_days,      /* Extra days */
               long       extension_days,  /* Extension days */
               char      counter_id,       /* Counter ID */
               char      walkin_flg,       /* Walkin Rental Flag (Y/N). Default = N */

```



```
char      waive_arpt_fee_flg, /* Waive Concession Fees (Y/N) */
char      rent_type_cd,      /* Specific Code identifying type of rental */
double    vhcl_weight,      /* Vehicle weight in tons */
double    vhcl_price,        /* Vehicle price - currency ??? */
double    Annual_vlf,        /* Vehicle registration cost */
char      *vhcl_reg_exp_dt,   /* Vhcl reg expiration YYYYMMDD */
char      *vhcl_type,        /* Vehicle type, CR=Car, TR=Truck */
char      *vhcl_reg_cry,     /* Vehicle registration country (US) */
double    ytd_vlf,           /* Year-to-date Vehicle License Fee */
struct out_schgs *out );     /* Output Structure returned to caller */
```

The output structure (out\_schgs) returned to the Charge engine is defined in the Surcharge Engine Design document.

When a vehicle identification number is not provided ( as might be the case during reservation ), VLF (Vehicle License Fees) will be provided as two separate items (a minimum and a maximum). Both line items will have a 'NS' (Not-Active, Show) activity code so that they do not factor in the calculated rental estimate. However, they can be used to provide disclosure as to what the final cost for that item will be at closing.

On exit, the program returns to ROPTS0100A\_SvcDataAccess with a return code and an updated count of the charge line items.

#### 3.1.3.1.11 Sales Tax Charges (ropu0180)

Once all charges pertaining to this rental have been calculated and surcharged, the tax service module is called to calculate any applicable taxes. Similar to surcharges, the charges are summarized and presented as a single line item. In countries such as Canada, where there is more than one sales tax type, the charge engine will generate one tax line per tax id.

The tax service module loops through all charges created thus far, retrieves tax data for checkout country and charge type from cache or the database, and calculates the applicable taxes, accumulating the tax amounts for all tax levels across calls (for each charge). Specific details of the TAX Engine are provided in the Tax Engine Design document.

Basic logic flow for tax charge calculation is:

```
Initialize array of tax information, one element for each possible tax level
FOR each charge we have created so far
DO
    Call tax tuxedo service to calculate taxes
    Accumulate tax information into local array
END FOR

FOR each item in the tax array (each "level")
DO
    Create a line item for the tax
```

END FOR

Adjust created line items with respect to MAXIMUM tax

The calculation itself is not performed in ropu0180. Rather, a Tuxedo server implements the tax engine and the following wrapper program is used for easy access.

```
int FindTaxes( double      amt,           /* Tax Basis */
               char        *chg_typ,     /* RCT charge type */
               char        *co_cry,      /* Checkout country code */
               char        *co_stn,      /* Checkout station */
               char        *co_state_cd, /* State code for pickup branch */
               char        *co_date,     /* Checkout date */
               int         exempt_flag,   /* Exempt flag */
               int         *tax_applied,  /* indicate whether charge is taxable */
               char        *schg_id,     /* Is this a surcharge */
               long        con_id,       /* Contract ID */
               char        counter_id,   /* Counter ID within station */
               struct out_rops_tax *save, /* Output structure - Accumulated values */
               double      *tax_val);    /* Individual item tax */
```

The output structure (out\_rops\_tax) returned to the charge engine is defined in the TAX Engine Design document.

Currently, the charge engine does not display 0 tax lines, but Gap 30 requires a change to that logic so that exempted tax line items can be created. Whereas VRS used the activity code 'NN' to effectively exclude exempt taxes from overall calculation, ERAC requires that the Tax Engine zeroes the amount that would normally be charged. The charge engine will be modified to not ignore zero amounts.

On exit, the program returns to ROPTS0100A\_SvcDataAccess with a return code and an updated count of the charge line items.

### 3.1.4 Optimization

#### 3.1.4.1 Unit Recalculation

The charge engine recalculates the unit count for each charge frequency and optimizes as necessary taking into account the billing cycle and the available rate buckets. For example, a weekly rate might be offered for a 5-day rental if the total is less than the daily rate times 5. The client application has the option of forcing the charge engine to accept the input parameters as specified by setting the FN\_BENG\_RECALC\_UNIT\_FLAG to 'N'. Unit recalculation is performed for the following charge types:

- Vehicle Rates
- Equipment Charges

- Coverage Charges
- Ancillary Charges

Each charge type is processed independently of the other. No optimization is performed if the billing cycle is Calendar as the implication is that only daily rates are valid. Also, provision is made so that a 1-day rental spanning 2 calendar days evaluates to 1 day if the total elapsed time does not exceed 24 hours. However, once the rental duration exceeds 24 hours, the total number of days charged will be based on the number of spanned calendar days. For example, a 36 hour rental (Tuesday 20:00 to Thursday 08:00) would evaluate to 3 days.

#### **3.1.4.2 Vehicle Exchange**

ERAC requires that the licensing fees for each vehicle used in a ticket to appear as a separate line item. The charge engine needs to call the surcharge engine for each vehicle movement with different duration values. In order to achieve that, the client application should ensure that a matched set of vehicle and rate structures exists. The charge engine input interface has been modified to separate vehicle and rate groupings to allow that. Since each rate structure is optimized separately, it is possible to generate delta duration values that do not add up to the rental duration. In order to avoid that problem, the following rules will be utilized:

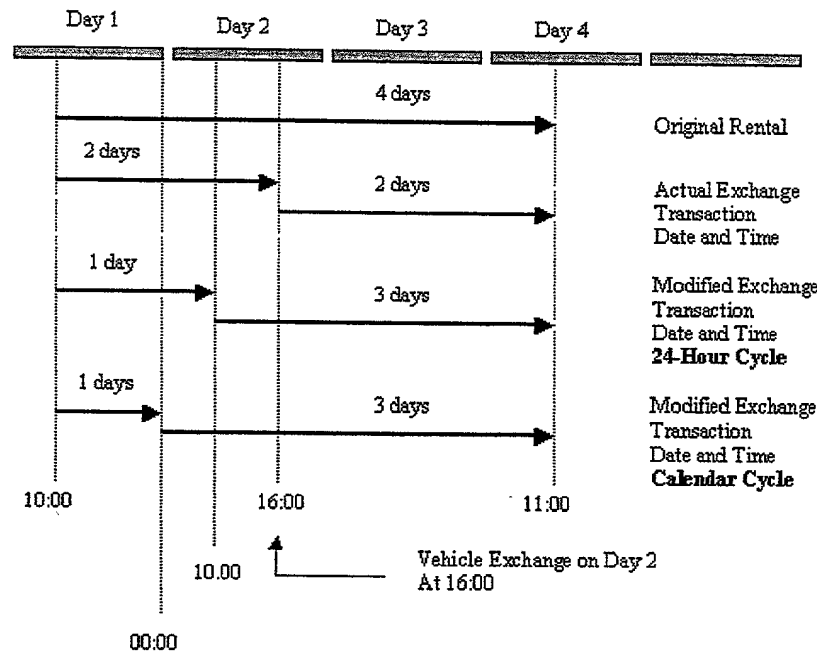
##### **24-Hour Billing Cycle:**

1. The start date for each exchange will be the Exchange date and the start time will be the Pickup time or the actual Exchange time whichever is earliest. The end date and time will be the return date and time.
2. The end date and time on the rate for the previous vehicle used will be the start date and time of the exchange minus 1 second.

##### **Calendar Billing Cycle:**

1. The start date and time for each exchange will be the exchange date and midnight. The end date and time will be the return date and time.
2. The end date and time on the rate for the previous vehicle used will be the date prior to the exchange at 23:59.

The diagram below illustrates this:



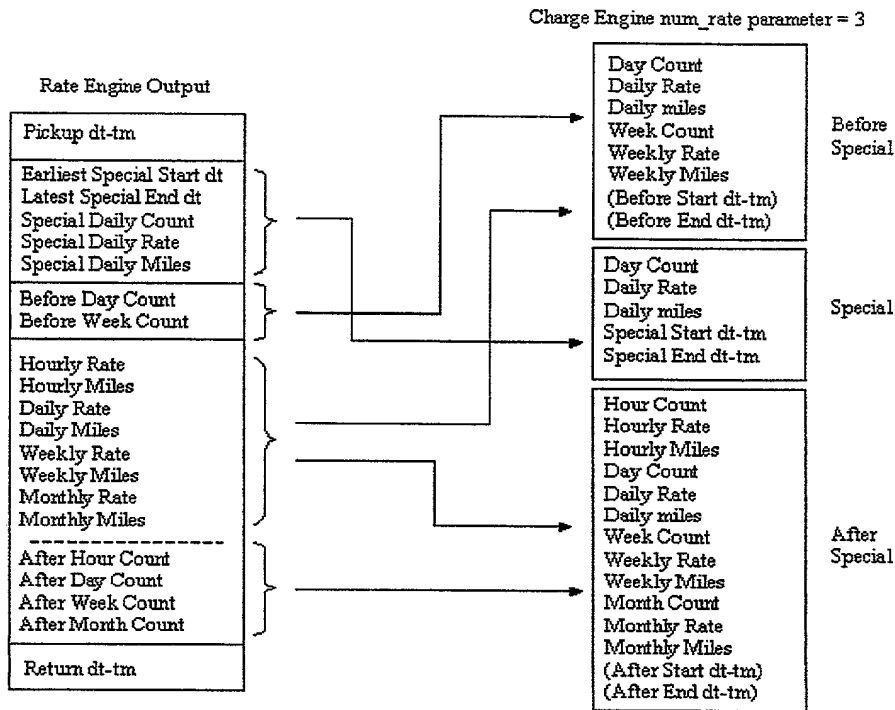
By creating two rate structures with the start and end periods as shown above, the charge engine will be able to calculate VLF (Vehicle License Fees) for each vehicle used in the ticket by using different duration values when calling the surcharge engine. This assumes that on the day of exchange, the VLF will be charged against the vehicle to be exchanged for that full day. For calendar billing cycle, a full day begins at midnight – for 24-hour billing cycle, a full day begins at the Pickup time.

### 3.1.4.3 Special Product Handling

The method for handling specials by the charge engine is similar to the discussion above with respect to vehicle exchange. Essentially, a ticket based on a special product will consist of 3 rate periods presented to the charge engine as three independent occurrences. Since ERAC has requested that each occurrence be optimized independently, this fits in well with the multiple grouping design. The definition and specific requirement for Specials are covered in the Rate Engine Design document. In this document, the focus is on the necessary transformation of the data returned by the rate engine for charge calculation and eventual allocation.

The three rate periods are defined as the “Before Special”, “Special” and “After Special”. The before and after periods share the same cost figures and the special period has its own. Each period is optimized separately. The Client application is expected to provide the start and end date/time for each period and maintain 24-hour increment for the period before the special. If the whole rental

falls within the special period, it is not necessary to provide a 'before' and 'after' rate grouping as shown below unless there is a requirement to disclose to the renter what the cost will be if the pickup and return date/time changes.



For each of the scenarios described in the Rate engine document, the inputs to the charge engine with respect to start and end date and time, are populated as shown below. The qualifications for the Special product is 'Earliest Pickup' – Thursday at 12:00PM and 'Latest Return' – Monday at Pickup Time.

**Scenario 1: Entire rental falls within the Pickup earliest and return latest days for Special:**

	Charge Engine Rate Occurrence – 1	Charge Engine Rate Occurrence – 2	Charge Engine Rate Occurrence – 3
Pickup - 200108091300			
Return - 200108131100			
Before Special Start	200108091300		
Before Special End	200108091300		
Special Start (200108091200)		200108091300	
Special End (200108131200)		200108131100	
After Special Start			200108131100
After Special End			200108131100

**Scenario 3: Return is after the return latest day for Special:**

	Charge Engine Rate Occurrence - 1	Charge Engine Rate Occurrence - 2	Charge Engine Rate Occurrence - 3
Pickup - 200108101300			
Return - 200108141100			
Before Special Start	200108101300		
Before Special End	200108101300		
Special Start (200108091200)		200108101300	
Special End (200108131200)		200108131300	
After Special Start			200108131301
After Special End			200108141100

**Scenario 4: Pickup is same day as earliest Pickup day - Agent overrides time:**

	Charge Engine Rate Occurrence - 1	Charge Engine Rate Occurrence - 2	Charge Engine Rate Occurrence - 3
Pickup - 200108091000			
Return - 200108130800			
Before Special Start	200108091000		
Before Special End	200108091000		
Special Start (200108091200)		200108091000	
Special End (200108131200)		200108130800	
After Special Start			200108130800
After Special End			200108130800

**Scenario 5: Override earliest pickup day of week so that Special can be offered:**

	Charge Engine Rate Occurrence - 1	Charge Engine Rate Occurrence - 2	Charge Engine Rate Occurrence - 3
Pickup - 200108081500			
Return - 200108131100			
Before Special Start	200108081500		
Before Special End	200108091459		
Special Start (200108091200)		200108091500	
Special End (200108131200)		200108131100	
After Special Start			200108131100
After Special End			200108131100

**Scenario 6: Override earliest pickup day of week so that Special can be offered. Rental also extends beyond special latest return:**

	Charge Engine Rate Occurrence - 1	Charge Engine Rate Occurrence - 2	Charge Engine Rate Occurrence - 3
Pickup - 200108081500			
Return - 200108141100			
Before Special Start	200108081500		
Before Special End	200108091459		
Special Start (200108091200)		200108091500	
Special End (200108131200)		200108131100	
After Special Start			200108131100
After Special End			200108141100

To summarize, the charge engine processes each occurrence of the vehicle rate data as any other ticket with one rate occurrence. Although the input structure to the charge engine was modified with

repeating groups to support multiple products within the same ticket, that structure lends itself well for handling specials also, although the specified product for all 3 occurrences will be the same. The time period from one occurrence to the next is assumed to be in 24-hour increments – Refer to the assumption list in the Rate engine design.

### 3.1.5 Calling Processes Variations

This section is provided to give a sample of calls to the charge engine. The examples are taken directly from the 'Consolidated VRS Proposed Solutions' document, section 4.2.3. The normal process for using the services of the charge engine is to first obtain the necessary information for creating line item charges. This process would involve a call to the rate engine to obtain rates at some point during the rental process and calls to other engines *as required* to obtain data for ancillary charges.

A representative sequence of calls follows:

```
BEGIN
  IF reservation or a ticket without res THEN
    Call rate engine to obtain rates
  ELSE
    Use rates for Ticket from "saved" information
  END IF

  Call ancillary engine as needed

  Populate all charge engine required inputs
  Call the Charge Engine
  Process the returned output (line items)
END
```

### 3.1.5.1 Reservations

A reservation is made using the 800 number for pickup at the St. Louis airport on March 21<sup>st</sup>. No specific product is requested. A representative set of data is shown in the example below.

1. **Call the product rate service** to get the rates for the default retail product
2. **Call the ancillary engine** to get the rates for 'Young Renter', 'Additional driver' and 'After Hour' charges as required.
3. Populate the charge engine input fields (make sure all mandatory fields are accounted for).
4. For estimate and disclosure purposes, the parameters for the requested car class could be specified (if known) to get more accurate surcharges.
5. **Call the charge engine** using a Tuxedo system call
6. Process the charge engine output

INPUTS	
call_mode	RS
co_date	200106040800
co_cry	US
co_curr	USD
co_stn_id	0110
co_state_id	MO
cl_date	200106070800
cl_stn_id	0110
Rental_duration	3
num_rate	1
Prod_inst_cd	DEFLRET
vhcl_class	ICAR
vhcl_class_sfx	01
tm_days	3
tm_daily_rate	33



OUTPUTS						
Error_no	0					
err_text						
sql_error_no	0					
sql_error_text						
Amount	115.41					
Num_charges	6					
chg_acty	AS	AS	AS	NS	NS	AS
chg_amt	99.00	0.00	9.90	4.50	7.50	6.51
chg_basis			99.00			108.90
chg_rt	33.00	0.00		1.50	2.50	
Item_qty	1	1	1	1	1	1
chg_unit	3	0		3	3	
In_item_desc	Time & Distance	Unlimited Distance	Concession Recoupment	MIN Vehicle Registration Fee	MAX Vehicle Registration Fee	State Tax
In_item_desc2						
Pcnt_of_chg			10.00			5.98
rct_chg_typ	00001	00029	00025	00074	00074	00050
rut_cd	D		C	D	D	C
txc_strt_dt			20010401	20010401	20010401	20010401
txc_tc_cd			US4STARP1	US4STARP2	US4STARP2	US4STARP1
ts_type_cd			OPTL	VREG	VREG	STAX
taxable_ind	Y	Y	Y	N	N	N
inclusive_flg	N	N	N	N	N	N
allocation_ind	N	N	N	N	N	N
bac_acct_id						
dvr_dvr_id						
rcc_chg_cat	RNT	RNT	SUR	SUR	SUR	VAT
rct_glt_seq	628	628	445	544	544	753
rcc_chg_seq	1	1	15	15	15	17
rct_chg_seq	1	8	2	2	2	1
chg_st_dt	200106040800	200106040800	200106040800	200106040800	200106040800	200106040800
chg_end_dt	200106070800	200106070800	200106070800	200106070800	200106070800	200106070800

### 3.1.5.2 Open Ticket

At pickup, the client application has the option of re-rating an existing reservation by calling the product rate service again or simply use saved information to populate the input fields of the charge engine.

The process is similar to the one for Reservations except that the call\_mode input parameter is now 'CO'. Vehicle parameters may be provided at this time, in which case, the Vehicle License Fee item will be a single 'AS - Active-Show' line with the actual amount to be charged instead of the MIN and MAX lines.

### 3.1.5.3 Modify Ticket

A ticket, while in Open status, can be modified in a number of different ways. When a modification is made, usually in the length of the rental, a call to the rate engine is not always necessary unless there is a need to re-rate. The charge engine will automatically recalculate new unit counts based on the new rental end date/time and the charge frequency amounts that are populated (monthly, weekly, daily and hourly amounts). Additionally, it will optimize the counts by substituting for example a weekly rate for situations where the daily rate times the number of days would yield a higher amount. This process can be disabled by the client application – in that case, the charge engine will use the counts passed to it. Below are two examples of a 'Modify Ticket' situation.

#### 3.1.5.3.1 Rental Duration Changes

1. Get the rental information on open ticket
2. Populate the charge engine input fields (ensure all mandatory fields are accounted for).
3. For estimate and disclosure purposes assuming that a vehicle is assigned, all vehicle parameters could be specified to obtain accurate surcharges.
4. **Call the charge engine** using a Tuxedo system call
5. Process the charge engine output

INPUTS	
call_mode	CO
co_date	200106040800
co_cry	US
co_curr	USD
co_stn_id	0110
co_state_id	MO
ci_date	200106080800
ci_curr	USD
ci_stn_id	0110
rental_duration	3
num_rate	1
prod_inst_cd	DEFLRET
eff_start_dt	200106040800
eff_end_dt	200106040800
vhcl_class	ICAR
vhcl_class_sfx	01
tm_days	3
tm_daily_rate	33

OUTPUTS							
error_no	0						
err_text							
sql_error_no	0						
sql_error_text							
amount	153.88						
num_charges	6						
chg_acty	AS	AS	AS	AS	NS	NS	AS
chg_amt	132.00	0.00	0.00	13.20	6.00	10.00	8.68
chg_basis				132.00			145.20
chg_rt	33.00	0.00	4.42		1.50	2.50	
item_qty	1	1	1	1	1	1	1
chg_unit	4	0	0		4	4	
In_item_desc	Time & Distance	Unlimited Distance	Refueling Service	Concession Recoupment	MIN Vehicle Registration Fee	MAX Vehicle Registration Fee	State Tax
In_item_desc2							
pcnt_of_chg				10.00			5.98
rct_chg_typ	00001	00029	00022	00025	00074	00074	00050
rut_cd	D	R	R	C	D	D	C
txc_strt_dt				20010401	20010401	20010401	20010401
txc_fc_cd				US4STARP1	US4STARP2	US4STARP2	US4STARP1
ts_type_cd				OPTL	VREG	VREG	STAX
taxable_ind	Y	Y	Y	Y	N	N	N
inclusive_flg	N	N	N	N	N	N	N
allocation_ind	N	N	N	N	N	N	N
bac_acct_id							
dvr_dvr_id	12345	12345	12345	12345	12345	12345	12345
rcc_chg_cat	RNT	RNT	FUL	SUR	SUR	SUR	VAT
rct_glt_seq	628	628	614	445	544	544	753
rcc_chg_seq	1	1	12	15	15	15	17
rct_chg_seq	1	8	1	2	2	2	1
chg_st_dt	200106040800	200106040800	200106040800	200106040800	200106040800	200106040800	200106040800
chg_end_dt	200106080800	200106080800	200106080800	200106080800	200106080800	200106080800	200106080800

### 3.1.5.3.2 Vehicle Exchange

A vehicle exchange can be made without necessarily calling the charge engine, unless there is a rate change or new documents/print-outs need to be generated for the customer. In that case, the client application has the option of passing the different rate structures along with the appropriate duration to the charge engine for calculation. Whether or not a call is placed, vehicle information must be retained so that the correct fuel calculation is made at closing. The next section shows the breakdown for a ticket where the vehicle was exchanged once.

### 3.1.5.4 Close Ticket

When a vehicle is returned, the ticket is transitioned to the close status. At that time, all items that can generate a line item for this ticket should be known. If multiple vehicle movements took place during the rental, a repeating group of vehicle information must be passed to the charge engine so that the fuel calculation and associated surcharges for each vehicle can be generated. For the example shown below, assume that a vehicle exchange took place on 6/7 around noon.

INPUTS		
call_mode	CI	
co_date	200106040800	
co_cry	US	
co_curr	USD	
co_stn_id	0110	
co_state_id	MO	
ci_date	200106080800	
ci_curr	USD	
ci_stn_id	0110	
rental_duration	4	
num_rate	2	
prod_inst_cd	DEFLRET	DEFLRET
tm_days	2	2
tm_daily_rate	33	33
vhcl_id	1537352	1259708
eff_start_dt	200106040800	200106070800
eff_end_dt	200106070759	200106080800
num_vhcl	2	
vhcl_unit_nbr	1537352	1259708
vhcl_class	ICAR	ICAR
vhcl_class_sfx	01	01
vhcl_make	BUIC	BUIC
vhcl_model	SKYLARK	CENTURY
vhcl_wt	1353	1521
vhcl_price	18000	18000
total_annual_VLF	200	200
accumulated_VLF	115	140
vhcl_reg_exp_dt	20011210	20011025
vhcl_type	CR	CR
vhcl_reg_cry	US	US
co_odmtr	12400	13000
ci_odmtr	12525	13450
rfig_qty	4	1
rfig_cost	4.42	4.42
rfig_pay_type	P	P
vhcl_xchg_dt	200106040800	200106071200

OUTPUTS	
error_no	0
err_text	
sql_error_no	0
sql_error_text	
Amount	187.30
num_charges	9
chg_acty	AS
chg_amt	99.00
chg_basis	
chg_rt	33.00
item_qty	1
chg_unit	3
ln_item_desc	Time & Distance
ln_item_desc2	
pcent_of_chg	
rct_chg_typ	00001
rut_cd	D
txc_strt_dt	
txc_fc_cd	
ts_type_cd	
taxable_ind	Y
inclusive_flg	N
allocation_ind	N
bac_acct_id	
dvr_dvr_id	12345
roc_chg_cat	RNT
rct_glt_seq	628
roc_chg_seq	1
rct_chg_seq	1
chg_st_dt	200106040800
chg_end_dt	200106070759

## 4 Key Risks, Assumptions and Issues

### 4.1 Risks

### 4.2 Assumptions

#### 4.2.1 Transaction Type

1. The transaction type is a pass-through variable for the surcharge engine and is intended to indicate whether the rental is a replacement or not. Its domain values are *defined in the Surcharge Engine design document*.

#### 4.2.2 External Reference Data

1. All required vehicle information required for surcharge calculations will be passed in by the client application, as fleet information will not be retained within the VRS database.
2. VRS does not have direct access to the driver database table. Consequently, a renter ID must be provided with all requests. This ID is not validated and the user application may use any non-zero number - that number can be the same for all transactions.
3. No authorization data provided *through* iteration 3 (FN\_BENG\_NUM\_BILLTO = 0 and FN\_BENG\_NUM\_AUTH\_CHGS = 0). *All charges are allocated to the renter.*

#### 4.2.3 Rate Unit Type

1. *Neither the PKG rate nor the VAR rate structures will be used in Iteration 2 and Iteration 3.*

#### 4.2.4 Vehicle Exchange

1. During 'Open Ticket' and 'Close Ticket' state, each array of the rate structure should be duplicated for each vehicle exchange, but the actual rate parameters will be set to 0 or null for the second and all subsequent vehicles. This restriction is only for iteration 2. For iteration 3, rate information is required for each vehicle exchange (refer to section 3.1.4.2).
2. When a vehicle exchange takes place with no rate changes, all surcharges pertaining to the car class or vehicle rates will be calculated against the first vehicle. Only refuel and associated percent-based surcharges and taxes will be calculated on the additional vehicles. In future

iterations (after the retrofit of the surcharge engine), the VLF will be calculated per day, per vehicle based on each vehicle movement - refer also to reworked example in section 3.1.5.4 and open issue #1 in section 4.3.4.

3. Mileage calculation will accumulate across all vehicles used during the rental. The charge will be calculated taking into consideration the total miles driven and the total free miles allowance. If the excess mileage rate is zero, a single line item for Unlimited Mileage will be created with a total charged amount of 0.

#### 4.2.5 Rate Optimization

1. When manual modification is made to a rate, whether it's the vehicle rate, equipment, ancillary items or coverage, there may be a requirement to optimize the unit counts. The charge engine always optimizes unless the client application instructs it not to. A single input flag is provided for that purpose (FN\_BENG\_RECALC\_UNIT\_FLAG) – See section 3.1.4.
2. For Weekend special products, it is expected that each of the three possible periods will be specified as a separate rate group (same product) and will be optimized independent of each other per ERAC's request. The rental duration for each period will be determined based on the start and end date/time parameters.

#### 4.2.6 Coverage Staggered Rates

1. When the staggered number of days “FN\_BENG\_INS\_NBR\_STG\_DAYS” input parameter is non-zero, the staggered daily amount “FN\_BENG\_INS\_STG\_RT” must be populated.
2. When the staggered input parameters are specified, then the ‘Per Week’ and ‘Per Month’ parameters should not be populated.
3. The threshold day parameter is used when and if optimization is required.
4. The staggered rate applies to extra days beyond the initial days (threshold days).
5. Although staggered rates will be used within NY state, the charge engine will not perform such validation, nor will it perform validation to ensure that staggered rates are specified for only PAI and PEC coverage types.

## 4.3 Issues

### 4.3.1 Bundling

1. In VRS, when a component, such as equipment is bundled into the vehicle rate, all surcharges and taxes on that particular component, if they are also included, are added to the component's cost for unbundling purposes. Should the properties of the vehicle rate be used when calling for surcharges and taxes on inclusive components?

**RE:** Yes, when an item is included, its surcharge and tax properties should be the same as the vehicle rate charge type.

### 4.3.2 Coupon and Discount

1. The basis for discount and coupon is the remaining portion of the vehicle rate after the inclusive components have been backed out. We need to verify whether this will match ECARS requirement. For example, if the vehicle charge is 100.00 and the sum of inclusive items is 20.00, the remaining or effective vehicle charge is 80.00. Should a discount of 10% be off the 100.00 or the 80.00?

**RE:** The discount is off the total rate before unbundling. In the above example, the 10% would be applied against the 100.00.

2. How should the charge engine handle customer satisfaction coupon in iteration 2 ?

**RE:** John Evans will follow-up on this issue.

### 4.3.3 Excess Mileage Rate

1. Does ERAC have a requirement for specifying excess mileage rate for each of the charge frequency buckets (Hourly, Daily, Weekly and Monthly) ? If such requirement exists, what are the guidelines for processing those charges ?

**RE:** There is only one excess mileage rate.



#### 4.3.4 Vehicle License Fee

1. What are the Business rules to use in determining how vehicle surcharges are to be calculated ? Specifically, on a 3-day rental where the vehicle is exchanged with less than a full day remaining on the rental, how are 'perDay' or any other types of surcharges applied ?

**RE:** This issue is still open and a follow-up with Paul Graves of ERAC on how this is currently handled today needs to occur. Section 3.1.4.2 describes a proposal for handling this issue and needs ERAC's approval.

#### 4.3.5 Tax and Surcharges

1. There is a requirement to waive surcharges and taxes at the transaction level. Specific taxes and surcharge types can be waived. One option under consideration is to allocate waived surcharges to a different payer (primarily an internal account if ERAC will still have to pay for it).
2. Bundled charges - How do we handle tax on non-taxable items. How will the tax be actually paid ? Off tax charges or from revenue postings - Jon Jouris and John Evans will discuss with Pam.

### 2.1.2.3 Use Case: User Creates Distribution Channel Rate Adjustment

VRS will be enhanced to allow the user to define adjustments to established rates based on the distribution channel the renter used to initiate the reservation (Internet, GDS, Voice Reservations, etc.). A given rate adjustment entry will be specific to:

- Distribution Channel
- Product type
- Rate Hierarchy location (User defined area and type)
- Reservation date range

For every rate adjustment entry, the user will provide a daily rate adjustment, and optionally a weekly rate adjustment, and monthly rate adjustment to be applied to the selected base rate. These adjustments can be either positive or negative, and may be expressed as either a fixed amount adjustment or a percentage adjustment. Rate adjustments will be factored into the rates returned by VRS and will not be broken out as a separate line item.

When processing a reservation request, the rates engine will attempt to retrieve a distribution channel rates adjustment based on the input distribution channel, product type, reservation date, and rate hierarchy location that the associated rates header is defined at. If no entry is found for the above criteria, the rates engine will “work backward” through the distribution channel hierarchy searching for an applicable entry.

The following example illustrates the concept of walking backward through the distribution channel hierarchy.

#### Given:

- Travelocity is a child to Sabre in the distribution channel hierarchy
- Sabre is a child to GDS in the distribution channel hierarchy
- Retail rate is requested
- The rates engine is called, and the distribution channel code representing Travelocity is passed by the caller

#### Result:

- The rates engine retrieves the appropriate retail rate header for the input pick up location
- The rates engine attempts to retrieve a rate adjustment for Travelocity based on the other inputs mentioned above.
- If no applicable entry is found for Travelocity, the rates engine attempts to retrieve an entry for Sabre
- If no applicable entry for Sabre is found, the rates engine attempts to retrieve an entry for GDS

#### Goal In Context:

Create the entries necessary to create rate adjustments for Retail products based on the channel used by the renter to reserve the vehicle. This Use Case deals with Create activity on the VRS distribution channel rate adjustment table.

#### Scope:

#### Level:

#### Pre-Condition:

Distribution channels defined. Applicable product types created. User defined areas table populated with any necessary values.

#### Success End Condition:

Distribution channel rate adjustment created

#### Failed End Condition:

Distribution channel rate adjustment entry not created successfully

#### Primary Actor:

User responsible for maintaining distribution channel based rate adjustments (Super User).

#### Trigger Event:

New distribution channel rate adjustment is created.

#### 2.1.2.3.1 Main Success Scenarios

There steps needed for creating are a distribution channel based rate adjustment are shown below:

**Step 1: User specifies distribution channel**

User specifies the distribution channel that the rate adjustment will be associated with. The distribution channel specified must be defined in an earlier process.

**Step 2: User specifies product type that the adjustment is being created for**

User chooses the product type that the adjustment applies to from a pick list that contains valid product types

**Step 3: User specifies valid start and end dates**

User provides the date range that the input distribution channel rate adjustment record will be valid for. Input effective start date must be greater than or equal to current date. Input effective end date must be greater than input effective start date. Suggest a default of current date (effective start date) and 31-DEC-2037 (effective end date).

In order for a given row in this table to be selected, the reservation date and time passed by the caller to the rates engine must be between these two dates. No two rows in the distribution channel rate adjustments table can overlap on start and end dates for the same distribution channel, product type, location, and product type.

**Step 4: User specifies rate hierarchy location**

User provides user defined area name and type that the entry is applicable for. In order for this entry to be selected by the rates engine, the UDA name and type entered must match the UDA name and type from the candidate rate header.

**Step 5: User enters adjustment type**

The adjustment type indicates whether the amount provided represents a fixed amount or a percentage based adjustment.

**Step 6: User provides rate adjustment amount for daily rate**

The amount can be either positive or negative. Percentage adjustments are entered as whole numbers. To reduce the selected rate by 10%, the amount would be entered as -10.

**Step 7: User provides rate adjustment amount for weekly rate**

The amount can be either positive or negative. The weekly adjustment amount is optional. Null value indicates no adjustment is applicable for weekly component.

**Step 8: User provides rate adjustment amount for monthly rate**

The amount can be either positive or negative. The monthly adjustment amount is optional. Null value indicates no adjustment is applicable for monthly component.

**Step 9: User saves record.**

**Step 10: System validates input**

User interface verifies that no two rows "overlap" based on distribution channel, user defined area name and type, product type, and effective dates. System verifies that all data was entered, and valid values provided. Some sort of edit on the rate adjustment amounts would probably also be appropriate. Return error if invalid.

**Step 11: New Unique Identifier is generated**

Retrieve next number to assign from Distribution channel rate adjustment table sequence generator.

**Step 12: System saves record**

The input record is written to the distribution channel rate adjustment table.

Column Description	Data Type	Remarks
DCRA Uniq Identifier	Number(15)	Sequence Number
Distribution Channel	Varchar2(12)	
User Defined Area ID	Varchar2(10)	
User Defined Area Type	Varchar2(10)	
Product Type	Varchar2(1)	
Effective Start Date	Date	
Effective End Date	Date	
Adjustment Type	Varchar2(1)	<A>mount or <P>ercentage
Daily Adjustment	Number(15,3)	
Weekly Adjustment	Number(15,3)	
Monthly Adjustment	Number(15,3)	

**2.1.2.3.1.1 Scenario 1: User creates new distribution channel rate adjustment**

The following data is provided by a user to create a distribution channel rate adjustment entry:

Distribution Channel: **Internet**  
Product Type: **R**  
Effective Start Date: **01-SEP-2001**  
Effective End Date: **Ongoing**  
Rate Hierarchy Location: **Branch 0110**  
Daily adjustment: **10% off**  
Weekly adjustment: **10% off**  
Monthly adjustment: **5% off**

The goal is to provide a discount off of retail rates for renters using the Enterprise web site for making reservations. The daily and weekly rates for any applicable retail products will be reduced by 10%. The monthly rate will be reduced by 5%. The rate adjustment is valid for all car classes for reservations made on or after September 1, 2001. This offer is only good for rentals picked up at branch 0109.

INTERNET	▼	Internet Channel	R	▼	Standard Retail Rates
----------	---	------------------	---	---	-----------------------

User selects distribution channel INTERNET from pick list  
User specifies rate adjustment applies to retail rates

0110	▼	ATY_BRANCH	▼
------	---	------------	---

User selects user defined area defining geographical scope of the new row (Group 01).

01-SEP-2001	31-DEC-2037	P	Percent	▼
-------------	-------------	---	---------	---

User Sets Start date to September 1, 2001  
User accepts default end date  
User selects rate adjustment type (Percent)

-10	-10	-5
-----	-----	----

User sets daily, weekly, and monthly rate adjustment amounts and types

User saves record  
System validates user input  
System writes new record

The following record represents a row in the distribution channel rate adjustment table. This entry will be applied to any retail products that are defined at branch 0110.

Unique Identifier	Distribution Channel	Product Type	Uda Area ID	Uda Aty Area Type	Effc Start Date	Effc End Date
0000000001	Internet	R	0110	ATY_Branch	01-SEP-2001	31-DEC-2037

Adjustment Type	Daily Adjustment Amount	Weekly Adjustment Amount	Monthly Adjustment Amount
P	-10	-10	-5

## 2.1.2.3.1.2 Scenario 2: User creates new distribution channel rate adjustment for Retail at Region 01A

The following data is provided by a user to create a distribution channel rate adjustment entry:

Distribution Channel: **Sabre**  
Product Type: **R**  
Rate Hierarchy Location: **Region 01A**  
Effective Start Date: **01-SEP-2001**  
Effective End Date: **Ongoing**  
Daily adjustment: **10% off**  
Weekly adjustment: **Not Provided**  
Monthly adjustment: **Not Provided**

The goal is to provide a discount off of retail rates for renters using Sabre to make a reservation. The daily rates for any applicable retail products will be reduced by 10%. Since no weekly or monthly adjustment was provided, and weekly or monthly rate components returned by the rates or billing engine will not be adjusted. The rate adjustment is valid for all car classes for reservations made on or after September 1, 2001. This offer is only good for rentals where a retail product defined for Region 01A was selected by the rates engine.

Sabre	▼	Sabre	R	▼	Standard Retail Rates
-------	---	-------	---	---	-----------------------

User selects distribution channel Sabre from list of valid distribution channels  
User specifies rate adjustment applies to retail rates

01A	▼	ATY_REGION	▼
-----	---	------------	---

User selects user defined area defining geographical scope of the new row (Group 01).

01-SEP-2001	31-DEC-2037	P	Percent	▼
-------------	-------------	---	---------	---

User Sets Start date to September 1, 2001  
User accepts default end date  
User selects rate adjustment type (Percent)

-10	NULL	NULL
-----	------	------

User sets daily rate adjustment amount. No weekly or monthly is given

User saves record  
System validates user input  
System writes new record

The following record represents a row in the distribution channel rate adjustment table. This entry will be applied to any retail products that are defined at region 01A.

Unique Identifier	Distribution Channel	Product Type	Uda Area ID	Uda Aty Area Type	Effc Start Date	Effc End Date
0000000001	Internet	R	0110	ATY BRANCH	01-SEP-2001	31-DEC-2037
0000000002	Sabre	R	01A	ATY REGION	01-SEP-2001	31-DEC-2037

Adjustment Type	Daily Adjustment Amount	Weekly Adjustment Amount	Monthly Adjustment Amount
P	-10	-10	-5
<b>P</b>	<b>-10</b>		

\* Row in bold represents new data added for scenario 2

#### 2.1.2.3.2 Scenario Extensions

#### 2.1.2.3.3 Scenario Variations

##### 2.1.2.3.3.1 User Updates Distribution Channel Rate Adjustment Entry

The only information that can be updated for an existing record is the effective end date. The distribution channel rate adjustment record is invalid after the effective end date. The effective end date may be set to any valid date that is less than the existing effective end date and not less than the greater of either the effective start date or the current date.

##### 2.1.2.3.3.2 User Deletes a Distribution Channel Rate Adjustment entry

A user does not have the ability to physically delete an existing record.

#### 2.1.2.3.4 Related Information

### 2.1.2.3.5 Appendix A – Distribution Channel Rate Adjustment Retrieval

After a product/location offering (rates header) is selected by the rates engine, the distribution channel rate adjustments table is searched for any adjustments that apply to the selected product/pick up location. The distribution channel rate adjustment table is searched, looking for

- An entry where the distribution channel matches the input distribution channel or one of it's parents in the distribution channel hierarchy **and**
- The location (user defined area ID and type) for the distribution channel rate adjustment entry is equal to the user defined area name and type from the selected rate header.

The figures below illustrate this concept:

Assume:

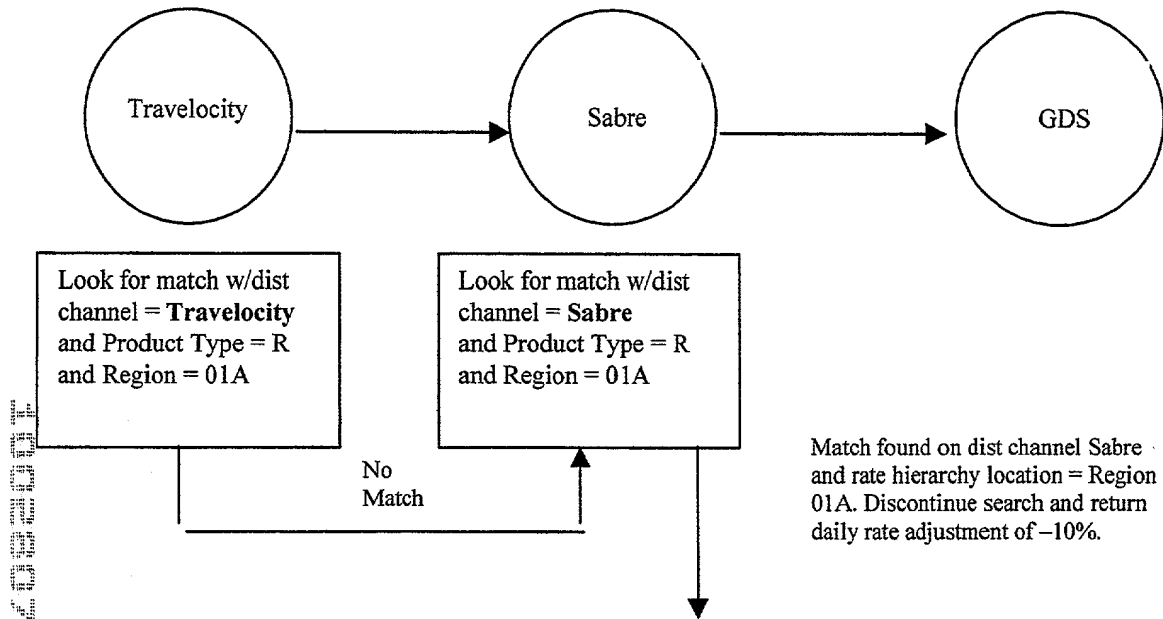
- Distribution channel Travelocity is a child of distribution channel Sabre
- Distribution channel Sabre is a child of distribution channel GDS
- A reservation request is received through distribution channel Travelocity for a retail product to be picked up at branch 0110
- The retail rate for branch 0110 is set up at the region level (Region 01A)
- Distribution channel rate adjustment table as shown below:

Unique Identifier	Distribution Channel	Product Type	Uda Area ID	Uda Aty Area Type	Effc Start Date	Effc End Date
0000000001	Internet	R	0110	ATY_BRANCH	01-SEP-2001	31-DEC-2037
0000000002	Sabre	R	01A	ATY_REGION	01-SEP-2001	31-DEC-2037

Adjustment Type	Daily Adjustment Amount	Weekly Adjustment Amount	Monthly Adjustment Amount
P	-10	-10	-5
P	-10		



Given the above scenario, the distribution channel rate adjustment table would be searched as shown in the following diagram:



## 2.1.2.4 Use Case: User Creates Rate Detail

The rate detail component describes the rate amounts and mileage limits for a single car class, reservation date range, and pickup date range for a specific rate header. Distance limits (the distance unit depends on the country where the rate is defined) and an excess distance charge can optionally be provided at the rate detail level. At minimum, there will be one rate detail for every car class offered by a rate header.

There are presently three types of rate detail in the VRS system. The time and mileage rate type extends some combination of hourly, daily, weekly, monthly, extra day and extra hour rates. The variable rate allows a different rate amount to be specified for each day of the week. The package rate varies the rate amount based on the length of the rental. SI retail and weekend special products will use the standard time and mileage rate type.

A fourth rate type is being introduced to VRS for Iteration Three. This rate type is a variant of the existing VRS package rate and will be used to store Bid Price rates.

The VRS Bid Price rate detail will be created by the NatRes to VRS data bridge. The existing NatRes system provides a Bid Price create/update user interface which among other things, keeps the rates stored in NatRes synchronized with the corresponding rates displayed on the GDS'. Any new user interface accessing the Bid Price rates stored in VRS should access the bid price rates for DISPLAY only. No create/update is permitted.

<b>Goal In Context:</b>	Create the rate detail for a standard SI retail product. <u>Create rate detail for a weekend special product.</u> When the task is complete, the appropriate data will be added to the RATE_DETAILS table.
<b>Scope:</b>	This Use Case deals with Create activity on the VRS rate detail table (RATE_DETAILS).
<b>Level:</b>	
<b>Pre-Condition:</b>	Rate header record created and applicable rate qual attached
<b>Success End Condition:</b>	Rate detail record created.
<b>Failed End Condition:</b>	Rate detail record not created successfully
<b>Primary Actor:</b>	User responsible for maintaining rate and mileage data. Rate bridges from ERAC system to VRS
<b>Trigger Event:</b>	New rate detail is created.

### 2.1.2.4.1 Main Success Scenarios

There are several steps involved in creating rate detail for use by SI retail (Non Bid Price) and special products.

#### Step 1: User selects rate header to add/update rate detail for

User specifies the appropriate rate header from a list of valid domain values. This list can be scoped by product type (i.e. <R>etail), and location.

#### Step 2: User enters date (optionally time) that rate will first be available for reservation

Date must be current or future. If current date is entered, time is defaulted to current time. If date is future, default to 00:00:00. Time portion should be stored in hh24:mi:ss format.

#### Step 3: User enters date (optionally time) that rate will last be available for reservation

Date must be current or future and greater than reservation start date. If current date is entered, time is defaulted to current time. If date is future, default to 23:59:59. Time portion should be stored in hh24:mi:ss format.

**Step 4: User enters date (optionally time) that rate will first be available for rental**

Date must be current or future. If current date is entered, time is defaulted to current time. If date is future, default to 00:00:00. Time portion should be stored in hh24:mi:ss format. Rental start date cannot be less than reservation start date.

**Step 5: User enters date (optionally time) that rate will last be available for rental**

Date must be current or future and greater than rental start date. If current date is entered, time is defaulted to current time. Time portion should be stored in hh24:mi:ss format. If date is future, default to 23:59:59. Rental end date cannot be less than reservation end date.

*Data maintenance process could optionally present one set of dates when rates are being input.*

*Reservation start and end dates could be set to the same values as rental start and end dates.*

**Step 6: User enters car class and car class suffix rate is applicable for**

Data maintenance process verifies valid car class and suffix entered. If car class invalid, return error message and halt processing.

**Step 7: User enters hourly rate**

Hourly rate is optional. Will not be entered for Special rates.

**Step 8: User enters hourly distance limit (if applicable)**

Optional. Required if hourly rate is present and daily mileage limit specified. Will not be entered for Special rates.

**Step 9: User enters daily rate**

Daily rate is required

**Step 10: User enters daily distance limit (if applicable)**

Optional. If daily mileage limit is omitted, unlimited mileage is implied.

**Step 11: User enters weekly rate (if applicable)**

Weekly rate not required. Will not be entered for Special rates.

**Step 12: User enters weekly distance limit (if applicable)**

Weekly mileage is required if weekly rate entered and daily mileage limit specified

**Step 13: User enters monthly rate (if applicable)**

Monthly rate not required. Will not be entered for Special rates.

**Step 14: User enters monthly distance limit (if applicable)**

Monthly mileage is required if monthly rate entered and daily mileage limit specified

**Step 15: User enters extra day rate (if applicable)**

Not used at this time

**Step 16: User enters excess mileage amount (if applicable)**

Must be entered if mileage limits specified

**Step 17: User attempts to save record**

**Step 18: Data maintenance process retrieves rate detail sequence number**

Data name on data record for sequence number is rtd\_id

**Step 19: Data maintenance process ties rate detail record to associated rate header**

The data maintenance process places the unique identifier of the associated rate header record (rth\_uniq\_id) into the foreign key field of the new rate detail record (rh\_rth\_uniq\_id).

**Step 20: Data maintenance process performs “authorization process” for rate detail record**

Authorization process includes:

- Performing edits based on steps 2 through 15
- Any other edits Enterprise feels are necessary to ensure valid rates

If errors are detected in the authorization process, the rate detail rate authorization flag (column name auth\_flg) is set to “U” (Unauthorized). If no errors are detected, the rate authorization status is set to “A” (Authorized). In either case, the data maintenance process inserts the creation operator id in the authorization user field (column name auth\_usr\_id), and the current date/time in the authorization date field (column name auth\_dt). **The VRS rates engine will not use any rate detail records that are unauthorized (auth\_flg not equal to “A”).**

**Step 21: Data maintenance process inserts new row into rate details table**

CREAT\_OPER\_ID field is populated with the ID of the user who created the new record. CREATE\_DT field is set to current date and time. RTD\_TYPE field is set to ‘TM’ (indicating that the rate detail is a time and mileage type rate).

If authorization errors are encountered (auth\_flg not equal to “A”), a list of errors should be returned the user. The user can be given the opportunity to correct the errors and retry rate authorization, or the user can save the unauthorized record, and return at a later time to correct and authorize the rate detail record in error.

If the authorization process is successful, the record is written to the database and committed.

Column Description	Column Name	Data Type
Rate Detail Sequence Number	Rtd_id	Number(15)
"Owning" Rate Header Unique Identifier	Rh_rth_uniq_id	Number(15)
Rate Detail Type	Rtd_type	Varchar2(10)
Car Class		Varchar2(8)
Car Class Suffix		Varchar2(4)
Reservation Start and Time	Res_strt_dt	Date
Reservation End and Time	Res_end_dt	Date
Rental Start and Time	Co_strt_dt	Date
Rental End and Time	Co_end_dt	Date
Hourly Rate	Hr_amt	Number(15,3)
Hourly Mileage Limit	Hr_mil_nbr	Number(4)
Daily Rate	Dly_amt	Number(15,3)
Daily Mileage Limit	Dly_mil_nbr	Number(4)
Weekly Rate	Wk_amt	Number(15,3)
Weekly Mileage Limit	Wk_mil_nbr	Number(4)
Monthly Rate	Mth_amt	Number(15,3)
Monthly Mileage Limit	Mth_mil_nbr	Number(4)
Number of Days in Rental Month	Mth_factor_nbr	Number(2)
Excess Mileage Amount	Excess_mil_amt	Number(15,3)
Authorization Operator	Auth_usr_id	Varchar2(32)
Authorization Date	Auth_dt	Date
Authorization Status	Auth_flg	Varchar2(1)
Create Operator	Creat_oper_id	Varchar2(32)
Create Date	Create_dt	Date
Update Operator	Updt_oper_id	Varchar2(32)
Update Date	Updt_dt	Date

\* Other data columns available on the rate details table will be introduced in future iterations

2.1.2.4.1.1 Scenario 1: User creates new rate detail record for SI retail rate header

The following data is provided by a user to create an SI retail rate detail:

Product: **Limited Mileage Medium Free Mileage**  
Location: **Branch 0109**  
Current Date: **01-JUN-2001**

Car Class: **CCAR**  
Res Start: **01-JUN-2001**  
Res End: **31-AUG-2001**  
Rental Start: **01-JUN-2001**  
Rental End: **31-AUG-2001**

Daily Rate: **17.99**  
Daily Mileage Limit: **150**  
Weekly Rate: **108.95**  
Weekly Mileage Limit: **900**

Excess Mileage Charge: **.25/mile**

R	▼	Standard Retail Rates	0109	▼	Branch	▼
---	---	-----------------------	------	---	--------	---

The user might begin by using a pick list in order to view all retail rate headers set up at branch 0109

LIMMED	Retail – 150 Free Miles/Day
UNLIMITD	Retail – Unlimited Free miles

The pick list might reveal that there are currently rate headers for two retail products available at branch 0109. The user selects the product (LIMMED) whose rate header describes it as a limited miles retail product. The user enters the data shown above and the results are shown on the following page .

Rate Detail ID	Rate Header ID	Res Start Date	Res End Date	Rental Start Date	Rental End Date	Car Class	Car Class Suffix
1	1	01-JUN-2001 13:33:01	31-AUG-2001 23:59:59	01-JUN-2001 13:33:01	31-AUG-2001 23:59:59	CCAR	**

Hour Amount	Hour Mileage	Daily Amount	Daily Mileage	Weekly Amount	Weekly Mileage	Monthly Amount	Monthly Mileage	Month Factor
9.00	30	17.99	150	108.95	900			

Excess Mileage Amount	Authorization Status	Authorization Date	Authorization Operator	Create Operator	Create Date
.25	A	01-JUN-2001 13:33:13	NCC1701	NCC1701	01-JUN-2001 13:33:01

## 2.1.2.4.1.2 Scenario 2: User creates new rate detail record for SI special rate header

The following data is provided by a user to create an SI weekend special rate detail:

Product: WSLMRT  
Location: Branch 0109  
Current Date: 01-JUN-2001  
  
Car Class: CCAR  
Res Start: 01-JUN-2001  
Res End: 31-AUG-2001  
Rental Start: 01-JUN-2001  
Rental End: 31-AUG-2001  
  
Special Rate: 9.95

S	▼	Special Rates	0109	▼	ATY_BRANCH	▼
---	---	---------------	------	---	------------	---

The user might begin by using a list of valid domain values in order to view all retail rate headers set up at branch 0109

WSLMRT	Weekend Special Branch 0109
--------	-----------------------------

The pick list might reveal that there is currently a rate headers for a weekend special product available at branch 0109. The user selects the product (WSLMRT) whose rate header describes it as a weekend special at branch 0109. The user enters the data shown above and the results are shown on the following page .



Rate Detail ID	Rate Header ID	Res Start Date	Res End Date	Rental Start Date	Rental End Date	Car Class	Car Class Suffix
1	1	01-JUN-2001 13:33:01	31-AUG-2001 23:59:59	01-JUN-2001 13:33:01	31-AUG-2001 23:59:59	CCAR	**
2	7	01-JUN-2001 14:21:01	31-AUG-2001 23:59:59	01-JUN-2001 14:21:01	31-AUG-2001 23:59:59	CCAR	**

Hour Amount	Hour Mileage	Daily Amount	Daily Mileage	Weekly Amount	Weekly Mileage	Monthly Amount	Monthly Mileage	Month Factor	Extra Day Amount	Extra Day Mileage
9.00	30	17.99	150	108.95	900					
		9.95								

Excess Mileage Amount	Authorization Status	Authorization Date	Authorization Operator	Create Date
.25	A	01-JUN-2001 13:33:13	NCC1701	01-JUN-2001 13:33:01
	A	01-JUN-2001 14:21:08	NCC1701	01-JUN-2001 14:21:01

\* Bolded row indicates new table entry for this scenario.

### 2.1.2.4.1.3 Scenario 3: User views Bid Price rate detail at branch 0110

The user wishes to view a rate at branch 0110 (UM). The following data is provided by a user to view a VRS Bid Price rate:

R	▼	Standard Retail Rates	0110	▼	ATY_BRANCH	▼
---	---	-----------------------	------	---	------------	---

The user might begin by using a list of valid domain values in order to view all retail rate headers set up at branch 0110

BIDRTL	Bid Price Rate Branch 0110
--------	----------------------------

The pick list might reveal that there is currently a rate header for a single retail product available at branch 0110. The user selects the product (BIDRTL) whose rate header describes it as a Bid Price Rate at branch 0110. The rate base unit on this rate header will contain the value "B". This will indicate that the data elements populated on any associated rate headers will be the following:

Column Description	Column Name	Data Type
Rate Detail Sequence Number	Rtd_id	Number(15)
"Owning" Rate Header Unique Identifier	Rh_rth_uniq_id	Number(15)
Rate Detail Type	Rtd_type	Varchar2(10)
Car Class		Varchar2(8)
Car Class Suffix		Varchar2(4)
Reservation Start and Time	Res strt dt	Date
Reservation End and Time	Res end dt	Date
Rental Start and Time	Co strt dt	Date
Rental End and Time	Co end dt	Date
Base Days	Base days	Number(3)
Base Rate	Base rt	Number(15,3)
Base Plus 1 Day Amount	Plus1 amt	Number(15,3)
Base Plus 2 Days Amount	Plus2 amt	Number(15,3)
Base Plus 3 Days Amount	Plus3 amt	Number(15,3)
Weekly Rate	Wk amt	Number(15,3)
Monthly Rate	Mth amt	Number(15,3)
Monthly Mileage Limit	Mth mil nbr	Number(4)
Number of Days in Rental Month	Mth factor nbr	Number(2)
Authorization Operator	Auth usr id	Varchar2(32)
Authorization Date	Auth dt	Date
Authorization Status	Auth flg	Varchar2(1)
Create Operator	Creat oper id	Varchar2(32)
Create Date	Create dt	Date
Update Operator	Updt oper id	Varchar2(32)
Update Date	Updt dt	Date

\* Other data columns available on the rate details table will be introduced in future iterations

The resulting display will show the one, two, three, and four day rates for the selected rate header as well as the weekly and monthly rates. The NatRes Active Rate (Bid Price) to VRS Bid Price data mapping is shown below.

**Given the following ERAC Active (Bid Price) Rate:**

Car Class:	ICAR
One Day Rental Daily Rate:	\$23.00
Two Day Rental Daily Rate:	\$22.00
Three Day Rental Daily Rate:	\$22.00
Four Day Rental Daily Rate:	\$21.00
Weekly Rate:	\$105.00
Monthly Rate:	\$420.00

**VRS Bid Price Equivalent (Using Package Rate Data Elements)**

Vehicle Category:	ICAR
Base Days:	1
Base Rate:	\$23.00
Plus 1 Amount:	\$22.00
Plus 2 Amount:	\$22.00
Plus 3 Amount:	\$21.00
Weekly Rate:	\$105.00
Monthly Rate:	\$420.00

ERAC Bid Price Column	Corresponding VRS Bid Price Column	Remarks
Car Type	Vct_cat_cd	
Day rental price 1	Base_rt	
N/A	Base_days	Will always be = 1 for Bid Price rates
Day rental price 2	Plus1_amt	
Day rental price 3	Plus2_amt	
Day rental price 4	Plus3_amt	
Weekly rental price	Wk_amt	
Monthly rental price	Mth_amt	

**2.1.2.4.2 Scenario Extensions****2.1.2.4.3 Scenario Variations****2.1.2.4.3.1 User Updates the Rate Detail Record****2.1.2.4.3.1.1 *Unauthorized Rate Detail***

For an unauthorized rate detail record, most data fields that allow user input during record creation time can be updated. When the user attempts to save the updated unauthorized rate detail record, the authorization process is repeated.

**2.1.2.4.3.1.2 *Authorized Rate Detail***

For an authorized rate detail record, the only field available for update is the reservation end date. The reservation end date of the rate detail record represents the last date and time that a reservation may be taken for the particular rate. The reservation end date can be updated to:

- Any valid date that is less than the current value of reservation end date.(Reservation end date cannot be extended)
- Any valid date that is greater than or equal to the current date (Reservation end date cannot be back-dated).

If the reservation end date is set to the current date, the time portion is set to current time. If the reservation end date is set to a future date, the time portion is set to 23:59:59. End dating a rate detail is one way of stopping a rate from being offered in the future.

**2.1.2.4.3.2 User Deletes a Rate Detail**

Unauthorized rate detail records can be physically deleted. A user does not have the ability to physically delete an authorized rate detail record.

**2.1.2.4.4 Related Information****2.1.2.4.5 References/Appendix –A**

## 2.1.2.5 Rate Header Qualification Association

### 2.1.2.5.1 Characteristic Information

VRS rate qualifications (rate qual) describe what conditions need to be met in order to qualify for a product at a particular location. Rate qualification records cannot be altered.

For any given reservation date/time and rental date/time combination, there can only be one applicable rate qual associated to the rate header. (Only one rate qual can be **actively** associated to a rate header at any one point in time). The initial rate header qual association is established when the rate header is created. For most products, this rate header/rate qual relationship may never require any maintenance. The rate header qual association table (RATE\_HEADER\_QUAL\_ASSN) allows the user to associate a different qual with a rate header if business conditions warrant. This use case will illustrate how to associate a different rate qual to a given rate header.

<b>Goal In Context:</b>	ERAC user associates a different rate qual with a rate header. Existing rate header qual association record updated and new rate header qual association record populated with appropriate data and new data record stored in VRS database.
<b>Scope:</b>	This Use Case deals with the Create activity on the VRS rate header qual association table. (RATE_HEADER_QUAL_ASSN).
<b>Level:</b>	
<b>Pre-Condition:</b>	Rate header previously defined and original rate header qual association in place. Appropriate rate quals have been created.
<b>Success End Condition:</b>	Different rate qual associated with a rate header. Existing rate header qual association end dated and new header qual record properly created.
<b>Failed End Condition:</b>	Different rate qual not associated with rate header. No data updates or creation takes place.
<b>Primary Actor:</b>	User responsible for maintaining qualification rules for a product at a given location.
<b>Trigger Event:</b>	Different qual associated to a rate header

### 2.1.2.5.2 Main Success Scenarios

The following steps detail the process of associating a different qual to a rates header:

**Step 1: User selects rate header that requires new qual association**

User specifies the appropriate rate header from a pick list. This pick list can be scoped by product type (i.e. <S>pecial), and location.

**Step 2: Data maintenance process defaults reservation start date and time to current date and time**

Time portion should be stored in hh24:mi:ss format.

**Step 3: : Data maintenance process defaults reservation end date and time to reservation end date and time of current active row.**

Time portion should be stored in hh24:mi:ss format.

**Step 4: : Data maintenance process defaults rental start date and time to reservation start date and time of new record.**

Time portion should be stored in hh24:mi:ss format.

**Step 4: : Data maintenance process defaults rental end date and time to reservation end date and time of new record.**

Time portion should be stored in hh24:mi:ss format.

**Step 5: User selects new rate qual for this product offering**

User selects rate qual from pick list. The value to be stored is an integer. The pick list should display the textual description of the quals. The data maintenance process will verify that a valid qual is entered or selected.

**Step 6: User attempts to save the new record.**

**Step 7: The data maintenance process updates the reservation end date of the existing active rate header qual association record.**

Reservation end date of existing active rate header qual assn. row is set to reservation start date/time of new row minus one second.

**Step 8: The data maintenance process formats rate header qual association row  
(RATE\_HEADER\_QUAL\_ASSN)**

Retrieve RATE\_HEADER\_QUAL\_ASSN sequence number from rate header qual association sequence number generator

Format the new row as follows:

Rate Header Qual Assn Column	Source
RHQA_UNIQ_ID	Generated sequence number
RH_RTH_UNIQ_ID	RTH_UNIQ_ID from rate header
RDB_DRTN_BND_CD	Value selected from rate qual pick list
RES_START_DT	Current date and time
RES_END_DT	Reservation end date and time of existing active record (This value was retrieved and saved prior to updating the reservation end date of the existing active record. .
EFFC_START_DT	Reservation start date and time of new record.
EFFC_END_DT	Reservation end date and time of new record.
CREATE_OPER	ID of operator performing create
CREATE_DT	Current system date/time

*RES and EFFC start and end dates will contain both the date and time w/time in hours, minutes, and seconds.*

**Step 9: The data maintenance process inserts rate header qual association row into rate header qual association table (RATE\_HEADER\_QUAL\_ASSN).**

**Step 10: Upon successful update of the existing row, and insertion of the new row in the rate header qual association table (RATE\_HEADER\_QUAL\_ASSN), the data maintenance process issues commit. If either the insert or update fails, data maintenance process issues a rollback.**

**2.1.2.5.2.1** Scenario 1: Associates Different Qual to a Weekend Special Product**Given:**

The weekend special product at branch 0109 is currently using a rate qual (qual ID 000002) that allows pick up on Thursday at noon. The business has decided that the weekend special should be available on Friday morning for pick up as early as 8:00 a.m. A rate qual supporting the new requirement has been created.

The new qual is associated to the rate header at 2:15 p.m. on June 01, 2001.

**User Input:**

S	▼	Special Rates	0109	▼	ATY_BRANCH	▼
WEEKEND		Weekend Special – Unlimited Miles				▼

User selects product/location from pick list. Data maintenance process retrieves associated rate header and saves the unique identifier of the rate header (rth\_uniq\_id) for later use.

000002	Weekend Special Noon Thurs Pickup	▼
000003	Weekend Special 8 a.m. Friday Pickup	

User selects new rate qual from pick list. Two weekend type quals are available; user selects qual with Friday 8:00 a.m. pickup.

User attempts to save new rate header qual association

### System Response:

The data maintenance process retrieves the existing rate header qual association (shown below)

Rate Header Qual Assn ID	Rate Header Unique ID	Rate Qualification Code	Reservation Start Date	Reservation End Date	Rental Start Date	Rental End Date
4	5	000002	20-MAY-2001 14:20:22	31-DEC-2037 23:59:59	20-MAY-2001 14:20:22	31-DEC-2037 23:59:59

Create Date	Create Operator
20-MAY-2001 14:20:22	NCC1701

The data maintenance process updates the reservation end date/time of the existing row to current date and time (as shown below)

Rate Header Qual Assn ID	Rate Header Unique ID	Rate Qualification Code	Reservation Start Date	Reservation End Date	Rental Start Date	Rental End Date
4	5	000002	20-MAY-2001 14:20:22	01-JUN-2001 14:15:15	20-MAY-2001 14:20:22	31-DEC-2037 23:59:59

Create Date	Create Operator
20-MAY-2001 14:20:22	NCC1701



## System Response (Continued):

New rate header qual association row is added (shown below)

Rate Header Qual Assn ID	Rate Header Unique ID	Rate Qualification Code	Reservation Start Date	Reservation End Date	Rental Start Date	Rental End Date
4	5	000002	20-MAY-2001 14:20:22	01-JUN-2001 14:15:15	20-MAY-2001 14:20:22	31-DEC-2037 23:59:59
8	5	000003	01-JUN-2001 14:15:16	31-DEC-2037 23:59:59	01-JUN-2001 14:15:16	31-DEC-2037 23:59:59

Create Date	Create Operator
20-MAY-2001 14:20:22	NCC1701
01-JUN-2001 14:15:16	HAL2001

If creation and insert of new rate header qual association, and update of existing active header qual association rows were successful, data maintenance process issues database commit and returns success. If insert or update fails, the data maintenance process issues database rollback and returns appropriate failure message.

Note that the new qual association row is active for reservation and rental one second after the existing row was end dated (reservation end date set to current date time – one second). No two entries in the rate header qual association table can overlap on both the reservation start and end date/time range and rental start and end date/time range for the same rate header.

Any reservations taken after 2:15 p.m. on June 01, 2001 for the WEEKEND product at branch 0109 will require that the renter pick up the vehicle on or after 8:00 a.m. on Friday. Any reservations made prior to 2:15 on June 01, 2001 for the WEEKEND product at branch 0109 are not effected.

### 2.1.2.5.3 Scenario Variations

#### 2.1.2.5.3.1 User Updates Rate Header Qual Association Entry

No manual updates to the rate header qual association are permitted. Any updates are handled by the data maintenance form that creates a new association record.

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### 3 VRS Engines/ Services Design Specifications

#### 3.1 Rate Engine

The VRS Rate Engine is a series of programs / services that apply business-defined rules, based on pricing related data, to facilitate the retrieval of rates and related rules for various components that drive the reservation and rental transactions.

Two new rate engine services would be required for ERAC's retail business. The Applicable Product Service (APS) would be responsible for determining the list of applicable products for a given set of input criteria. The list of applicable products would be presented by the graphical user interface. The rental employee would make a selection from the list and the Product Rate Service (PRS) would be invoked. The PRS would be responsible for determining the appropriate rate for the selected product. If the APS would return a list that contains only one product, no user intervention would be required, and PRS could be immediately invoked with the single product.

##### 3.1.1 Applicable Product Service - APS

This service module determines the list of applicable products for the given set of input criteria. The APS is invoked by the client application to generate the list of applicable products eligible to offer to the rental customer.

### 3.1.1.1 Inputs

Applicable Product Service Input - in_reng_aps				Version: 01.00		Technical		Source of
Input Parameter	Notes	FML Field Name			Type	Size	Data	
Standard Header	The content of this header will be used for debugging, user test support, performance monitoring, tuning and error logging	refer to standard header document for layout and population rules	Mandatory				Client App	
view_version	TUX interface id string	FN_MRENGTV001_VERSION	Mandatory		string	100	Tux View	
rate_source	Rate Source	FN_MEN_RATE_SOURCE	Mandatory		string	3	Client App	
res_stn_id	Reservation Station ID (Branch)	FN_MEN_RES_STN_ID	Mandatory		string	11	Client App	
res_tmstp	Reservation timestamp	FN_MEN_RES_TMSP	Mandatory		string	13	Client App	
co_stn_id	Pick-up Station ID (Branch)	FN_MEN_CO_STN_ID	Mandatory		string	11	Client App	
co_cty	Pick-up country	FN_MEN_CO_CTY	Mandatory		string	4	Client App	
co_tmstp	Pick-up timestamp	FN_MEN_CO_TMSP	Mandatory		string	13	Client App	
ci_tmstp	Return timestamp	FN_MEN_CI_TMSP	Mandatory		string	13	Client App	
primary_only	Request Primary product only	FN_MEN_PRIMARY_ONLY	Optional	N	string	1	Client App	
dist_chnl_hierarchy	Distribution channel hierarchy	FN_MEN_DIST_CHNL_HIER	Mandatory		string	100	Client App	

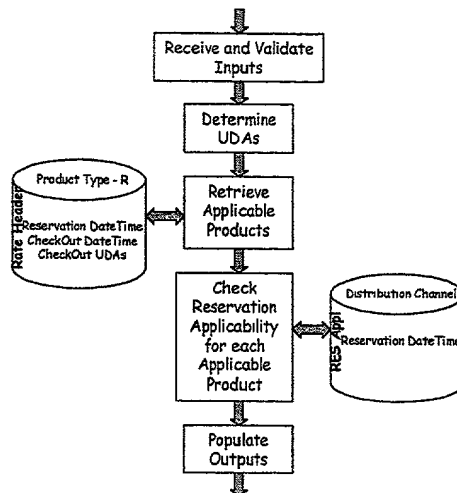
Applicable Product Service Input - Example	
Input Parameter	Example
standard_header	
view_version	System generated
rate_source	R
res_stn_id	0109
res_tmstp	200107211315
co_stn_id	0109
co_cty	US
co_tmstp	200107211315
ci_tmstp	200107221315
ci_stn_id	0109
ci_tmstp	200107221315
primary_only	N
dist_chnl_hierarchy	TRAVELOCITY SABER GDS

### 3.1.1.2 Outputs

Applicable Product Service Output (out_reng_aps)				Version: 01.00		Source
Output Parameter	Notes	FML Field Name	Example	Technical Type	Size	of Data
engine_error	Server error Code or 0	FN_MEN_ERR_STATUS	0	long	4	APS
engine_message	Server Error Text	FN_MEN_ERR_MESSAGE	All OK	string	100	APS
area_ids	For internal use by the Rate Engine and Sub-engines	FN_MEN_AREA_IDS	'0109','BRANCH','013','REGION'	string	1000	APS
num_appl_prods	Number of applicable products made up of below components (1-25)	FN_MEN_REC_COUNT	1	long	4	APS
rate_header_key	Rate Header Unique Identifier	FN_MEN_RATE_HDR_ID	9	long	4	RTH
uda	UDA where the Rate Header is defined	FN_MEN_RTH_UDA	0109	string	11	RTH
uda_type	UDA Type for the UDA	FN_MEN_RTH_UDA_TYPE	BRANCH	string	11	RTH
description	Rate Header description	FN_MEN_RTH_DESC	UNLIMITED	string	36	RTH
primary_rate_ind	Primary Rate Indicator	FN_MEN_PRIM_RATE_IND	P	char	1	RTH
prod_inst_cd	Product Instance Code	FN_MEN_PROD_INST_CD	UNLIM	string	9	RTH
prod_family	Product Family	FN_MEN_PROD_FMLY	RUNL	string	5	RTH
product_type	Product Type	FN_MEN_PROD_TYP_CD	R	char	1	RTH
currency_cd	Currency Code	FN_MEN_CURR_CD	USD	string	4	RTH
rate_base_unit	Rate Base Unit	FN_MEN_RATE_BASE_UNIT	D	char	1	RTH
tax_included	Tax Included	FN_MEN_TAX_INCL	N	char	1	RTH
surcharge_included	Surcharges Included	FN_MEN_SCHG_INCL	N	char	1	RTH
fuel_included	Fuel Included	FN_MEN_FUEL_INCL	N	char	1	RTH
discountable	Discountable 'Y' or 'N'	FN_MEN_DSCNT_FLG	Y	char	1	RTH
billing_cycle	24-hour(H) OR Calendar Day(C)	FN_MEN_BILLING_CYCLE	H	char	1	RTH

### 3.1.1.3 Detailed Process Flow

Once a user's request has been transmitted through the Tuxedo interface, the APS begins its task of generating the list of applicable products.



The APS will validate that the Reservation DateTime, Pick-up DateTime, and Return DateTime are valid. The valid format for input dates is YYYYMMDDHH24MI. For example, 200107211315 would represent July 21, 2001 1:15pm.

The Return DateTime must be later than the Pick-up DateTime.

If the input dates fail the validation checks, the APS will return an error to its caller along with a message indicating "Invalid Dates".

The APS will determine the list of UDAs and UDA-Types to which the Pick-up Branch belongs. The method in which the list of UDAs is determined is detailed in the UDA Hierarchy Design Document. This list will be used when determining the list of applicable rate headers.

If the list of UDAs is empty, the APS will return an error to its caller along with a message indicating "Data setup error - Pick-up Branch / UDA inconsistency".

The APS will use the Reservation DateTime, Pick-up DateTime, Rate Source and the list of UDAs and UDA-Types to determine the list of applicable rate headers.

The following constraints will be used when querying the RATES\_HEADER table:

#### RTH RATES\_HEADER

Reservation DateTime BETWEEN RTH.EFFC\_START\_DT and RTH.EFFC\_END\_DT  
Rate Source = RTH.PROD\_TYPE\_CD  
RTH.UDA\_ATY\_AREA\_TYP in (UDA-Types List)  
RTH.UDA\_AREA\_ID in (UDAs List)

The APS will maintain the results of the query in a linked list of applicable products.

The linked list will be traversed to retain entries which are defined at the lowest level in the Pick-up Branch's rate hierarchy. For example, if the list contains an entry which has a UDA-Type of BRANCH, then all other entries which do not have a UDA-Type of BRANCH will be removed from the linked list.

If the PrimaryOnly input value is set to Y, then only the rate header which has the PRIM\_RATE\_IND set to 'P' (designated as being PRIMARY) at the lowest level in the Pick-up Branch's rate hierarchy will remain applicable, and all other entries will be removed from the linked list.

For each remaining entry in the linked list of applicable products, the reservation applicability will be checked by querying the PROD\_AVLS table.

The following constraints will be used when querying the reservation applicability table:

#### AVL PROD\_AVLS

Reservation DateTime BETWEEN AVL.EFFC\_START\_DT and AVL.EFFC\_END\_DT  
Product Code from Rates Header = AVL.PRC\_PROD\_INST\_CD  
Distribution Channel = AVL.DIST\_CHNL  
AVL.PROD\_AVL\_TYP = 'D'  
AVL.AVL\_FOR in ('R', 'B')

If a product does not meet the above selection criteria, it's entry will be removed from the applicable product linked list.

If there are no applicable products remaining in the linked list, a message will be returned to the caller indicating "No Applicable Products".

If more than one product is available for a specified distribution channel and the distribution channel is not a 'Rental Branch', then the product defined as 'P'primary will be returned by APS. If no product is defined as primary, a message will be returned to the caller indicating that "there is more than one product available for this distribution channel".

The remaining products in the linked list will be used to populate the outputs of the APS.

The list of applicable products returned by the APS will be limited to no more than 25 for calls with a distribution channel of 'Rental Branch'.

Once the outputs have been populated and returned to the caller, the linked list will be deleted.

If applicable product list returned by the APS has only one entry, then the PRS can be invoked without user intervention.

If the vehicle category is the only optional input parameter not provided, and the resulting applicable product list returned by the APS has only one entry, then the PRS can be invoked without user intervention to return rates for all car classes attached to the single rate header.

## 3.1.2 Product Rate Service – PRS

This service module determines the rate details for the selected product. The PRS is invoked after a call to the APS, and is supplied with the unique rate header identifier of the selected product.

### 3.1.2.1 Inputs

Product Rate Service Input - in_reng_prs				Version: 01.00		Technical		Source of
Input Parameter	Notes	FML Field Name				Type	Size	Data
standard_header	The content of this header will be used for debugging, user test support, performance monitoring, tuning and error logging	refer to standard header document for layout and population rules	Mandatory					Client App
view_version	TUX interface id string	FN_MRENGTV001_VERSION	Mandatory			string	100	Tux View
rate_header_key	Rate Header Unique Identifier	FN_MEN_RATE_HDR_ID	Mandatory			long	4	APS
res_stn_id	Reservation Station ID (Branch)	FN_MEN_RES_STN_ID	Mandatory			string	11	Client App
res_tmstp	Reservation timestamp	FN_MEN_RES_TMSP	Mandatory			string	13	Client App
co_stn_id	Pick-up Station ID (Branch)	FN_MEN_CO_STN_ID	Mandatory			string	11	Client App
co_tmstp	Pick-up timestamp	FN_MEN_CO_TMSP	Mandatory			string	13	Client App
ci_stn_id	Return Station ID (Branch)	FN_MEN_CI_STN_ID	Mandatory			string	11	Client App
ci_tmstp	Return timestamp	FN_MEN_CI_TMSP	Mandatory			string	13	Client App
ci_grace_mins	Return grace minutes	FN_MEN_CI_GRACE_MINS	Mandatory			long	4	Client App
billing_cycle	24-hour (H) or Calendar Day (C)	FN_MEN_BILLING_CYCLE	Mandatory			char	1	Client App
rate_detail_key	Rate Detail Unique Identifier	FN_MEN_RATE_KEY	Optional	0		long	4	PRS
vehicle_category	Requested car class	FN_MEN_CAT_CD	Optional	-		string	9	Client App
vehicle_suffix	Requested car class suffix	FN_MEN_CAT_CD_SFX	Optional	-		string	5	Client App
dist_chnl_hierarchy	Distribution channel level hierarchy	FN_MEN_DIST_CHNL_HIER	Mandatory			String	100	Client App

Product Rate Service Input - Example	
Input Parameter	Example
standard_header	
view_version	System generated
rate_header_key	9
res_stn_id	0109
res_tmstp	200107211315
co_stn_id	0109
co_tmstp	200107211315
ci_stn_id	0109
ci_tmstp	200107221315
ci_grace_mins	59
billing_cycle	H
rate_detail_key	0
vehicle_category	ECAR
vehicle_suffix	**
dist_chnl_hierarchy	TRAVELCITY SABRE GDS

### 3.1.2.2 Outputs

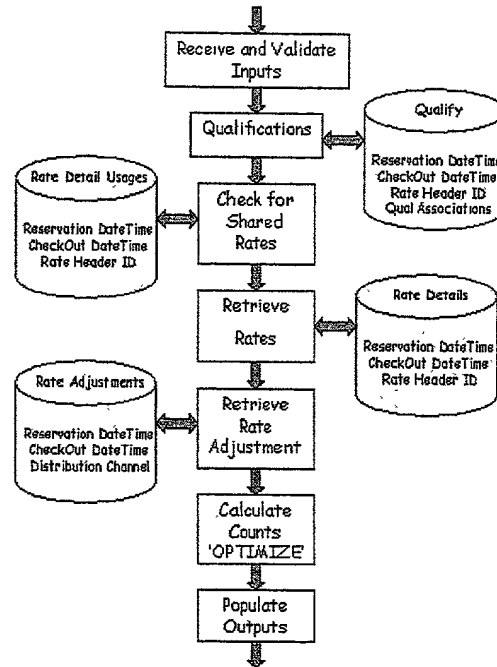
Product Rate Service Output (out_reng_prs)				Version: 01.00		Technical		Source
Output Parameter	Notes	FML Field Name	Example			Type	Size	Of
engine_error	Server error Code or 0	FN_MEN_ERR_STATUS	0			long	4	PRS
engine_message	Server Error Text	FN_MEN_ERR_MESSAGE	All OK			string	100	PRS
rental_duration_days	Rental duration in days	FN_MEN_RENTAL_DURATION	1			long	4	PRS
rental_duration_hours	Rental duration in hours	FN_MEN_RENTAL_DUR_HOURS	24			long	4	PRS
fuel_unbld_amt	Unbundle amount for included fuel	FN_MEN_FUEL_UNBLD_RENT_AMT	Null			double	8	PFC
num_records	Number of rate records made up of below components (1-25) preceeded by an *	FN_MEN_REC_COUNT	1			long	4	PRS



*vehicle_category	Car Class	FN_MEN_CAT_CD	ECAR	string	9	RDT
*vehicle_suffix	Car class suffix	FN_MEN_CAT_CD_SFX	**	string	5	RDT
*rate_detail_key	Unique identifier for rate detail row	FN_MEN_RATE_KEY	21	long	4	RDT
*total_seat_price	(hourly_count * hourly_rate) + (daily_count * daily_rate) + (weekly_count * weekly_rate) + (monthly_count * monthly_rate) + (extra_hourly_count * extra_hourly_rate) + (extra_daily_count * extra_daily_rate)	FN_MEN_SEAT_PRC	15.99	double	8	PRS
*total_free_miles	(hourly_count * hourly_miles) + (daily_count * daily_miles) + (weekly_count * weekly_miles) + (monthly_count * monthly_miles) + (extra_hourly_count * extra_hourly_miles) + (extra_daily_count * extra_daily_miles)	FN_MEN_TOT_FREE_MILES	150	long	4	PRS
*excess_mileage_fee	Excess mileage fee	FN_MEN_XS_MIL_FEE	.30	double	8	RDT
*Unlimited_miles_ind	Unlimited mileage indicator	FN_MEN_UNLIMITES_MILES_IND	N	char	1	PRS
*drop_fee	Drop charge associated to one-way rental	FN_MEN_OWY_CHG	Null	double	8	DPCH
*hourly_count	Number of hour units	FN_MEN_TM_HR_CNT	0	long	4	RDT
*hourly_rate	Hourly rate	FN_MEN_TM_HR_RATE	5.99	double	8	RDT
*hourly_miles	Hourly free miles	FN_MEN_TM_HR_MIL	Null	long	4	RDT
*daily_count	Number of day units	FN_MEN_TM_DY_CNT	1	long	4	PRS
*daily_rate	Daily rate	FN_MEN_TM_DY_RATE	15.99	double	8	RDT
*daily_miles	Daily free miles	FN_MEN_TM_DY_MIL	150	long	4	RDT
*weekly_count	Number of week units	FN_MEN_TM_WK_CNT	0	long	4	PRS
*weekly_rate	Weekly rate	FN_MEN_TM_WK_RATE	79.99	double	8	RDT
*weekly_miles	Weekly free miles	FN_MEN_TM_WK_MIL	Null	long	4	RDT
*monthly_count	Number of month units	FN_MEN_TM_MO_CNT	0	long	4	PRS
*monthly_rate	Monthly rate	FN_MEN_TM_MO_RATE	Null	double	8	RDT
*monthly_miles	Monthly free miles	FN_MEN_TM_MO_MIL	Null	long	4	RDT
*extra_hourly_count	Number of extra hour units	FN_MEN_TM_XTR_HR_CNT	0	long	4	PRS
*extra_hourly_rate	Extra hour rate	FN_MEN_TM_XTR_HR_RATE	5.99	double	8	RDT
*extra_hourly_miles	Extra hour free miles	FN_MEN_TM_XTR_HR_MIL	Null	long	4	RDT
*extra_daily_count	Number of extra day units	FN_MEN_TM_XTR_DY_CNT	0	long	4	PRS
*extra_daily_rate	Extra day rate	FN_MEN_TM_XTR_DY_RATE	15.99	double	8	RDT
*extra_daily_miles	Extra day free miles	FN_MEN_TM_XTR_DY_MIL	Null	long	4	RDT
qual_id	Unique identifier for qualifier row	FN_MEN_RATE_QLFR_ID	14	long	4	RDB
earliest_co_dow	Earliest checkout day of week (1-7)	FN_MEN_EARLIEST_CO_DOW	THU	string	4	RDB
earliest_co_time	Earliest checkout time (seconds)	FN_MEN_EARLIEST_CO_TIME	43200	long	4	RDB
latest_ci_dow	Latest checkin day of week (1-7)	FN_MEN_LATEST_CI_DOW	MON	string	4	RDB
*min_days	Minimum rental duration (days)	FN_MEN_MIN_DRTN	0	long	4	RDB
*max_days	Maximum rental duration (days)	FN_MEN_MAX_DRTN	999	long	4	RDB
*min_charge_days	Minimum number of charge days	FN_MEN_MIN_DYS_CHG	0	long	4	RDB
earliest_special_start_dt_tm	Earliest Date/Time of special rate	FN_MEN_EARLIEST_SPECIAL_DT_TM	200108101300	string	13	PRS
latest_special_end_dt_tm	Latest Date/Time of special rate	FN_MEN_LATEST_SPECIAL_DT_TM	200108131300	string	13	PRS
*special_daily_count	Number of days to charge special rate	FN_MEN_SPECIAL_DY_COUNT	3	long	4	PRS
*special_daily_rate	Special rate	FN_MEN_SPECIAL_DY_RATE	9.99	double	8	RDT
*Special_daily_miles	Daily mileage allowance for the special	FN_MEN_SPECIAL_DY_MIL	50.0	long	4	RDT
*before_special_day_count	Number of day units before special period to charge standard daily rate	FN_MEN_BEFORE_SPECIAL_DY_CN	0	long	4	PRS
*before_special_week_count	Number of week units before special period to charge standard weekly rate	FN_MEN_BEFORE_SPECIAL_WK_CN	0	long	4	PRS
rate_adj_type	Rate adjustment type ('P' or 'A')	FN_MEN_RT_ADJ_TYPE	A	char	1	RAD
daily_rate_adj	Daily rate adjustment	FN_MEN_RT_ADJ_DY	1.00	double	8	RAD
weekly_rate_adj	Weekly rate adjustment	FN_MEN_RT_ADJ_WK	5.00	double	8	RAD
monthly_rate_adj	Monthly rate adjustment	FN_MEN_RT_ADJ_MO	0.00	double	8	RAD
rate_adj_dist_chnl	Rate adjustment distribution channel	FN_MEN_RATE_ADJ_DIST_CHNL	SABRE	string	13	PRS

Note: Bolded fields represent output values associated with the specials design document pending approval. Values preceded by an \* denote that up to 25 values can be returned.

### 3.1.2.3 Detailed Process Flow



The PRS will validate that the Reservation DateTime, Pick-up DateTime, and Return DateTime are valid. The valid format for input dates is YYYYMMDDHH24MI. For example, 200107211315 would represent July 21, 2001 1:15pm.

If the input dates fail the validation checks, the PRS will return an error to its caller along with a message indicating "Invalid Dates".

The PRS will determine the qualifier associated to the rate header by querying the qualification tables:

The following constraints will be used when querying the qualification tables:

```

RDB      RNT_DRTN_BNDS
RHQA     RATE_HEADER_QUAL_ASSN

```

```

Reservation DateTime BETWEEN RHQA.RES_START_DT and RHQA.RES_END_DT
Pick-up DateTime BETWEEN RHQA.EFFC_START_DT and RHQA.EFFC_END_DT
RDB.DRTN_BND_CD = RHQA.RDB_DRTN_BND_CD
Rate Header ID = RHQA.RH_RTH_UNIQ_ID

```

If there are no result rows, the PRS will return a message indicating "Data setup error - No qualifier defined for Rate Header".

The retrieved row will contain qualification rules for the product. These qualification rules are:

Minimum rental duration  
Maximum rental duration  
Must include days  
Must exclude days  
Required overnight keeps  
Pick-up start/end time  
Minimum charge days

If the product fails to meet any of the qualification rules, then the user\_info\_message will be set to a message indicating the reason code for the disqualification (e.g. Product failed minimum number of rental days).

If the Return Branch id different than the Pick-up Branch, the PRS will determine if there are any drop charges by querying the DROP\_CHARGES table.

The following criteria will be used when querying the DROP\_CHARGES table:

#### DPCH DROP\_CHARGES

Reservation DateTime BETWEEN DPCH.RES\_START\_DT and DPCH.RES\_END\_DT  
Pick-up DateTime BETWEEN DPCH.EFFC\_ST\_DT and DPCH.EFFC\_END\_DT  
Pick-up Branch = DPCH.STN\_STN\_ID  
Car Class = DPCH.VCT\_CAT\_CD  
Return Branch = DPCH.STN\_STN\_ID\_DROPOFF  
Rate Header ID = DPCH.RATES\_HEADER\_RTH\_UNIQ\_ID

If the rate header indicates that fuel is included with the selected product, the PRS will determine the unbundling (back-out) amount for the fuel charges.

The following criteria will be used when querying the PROD\_FUEL\_CHGS table:

#### PFC PROD\_FUEL\_CHARGES

Reservation DateTime BETWEEN PFC.RES\_START\_DT and PFC.RES\_END\_DT  
Pick-up DateTime BETWEEN PFC.EFFC\_STRT\_DT and PFC.EFFC\_END\_DT  
Product instance code = PFC.PIN\_PROD\_INST\_CD

The PRS will determine if the supplied rate header identifier uses the rates of another rate header (shared rates) by querying the RATE\_DETAIL\_USAGES table.

The following constraints will be used when querying the RATE\_DETAIL\_USAGES table:

#### RDU RATE\_DETAIL\_USAGES

Reservation DateTime BETWEEN RDU.RES\_START\_DT and RDU.RES\_END\_DT  
Pick-up DateTime BETWEEN RDU.CO\_START\_DT and RDU.CO\_END\_DT  
Rate Header ID = RDU.RH\_RTH\_UNIQ\_ID

The internal variable RATE\_HDR\_ID will now contain the unique identifier of the rate header which will be used when retrieving the rate details.

The PRS will then retrieve the vehicle rates by querying the RATE\_DETAILS table.

If the vehicle category is supplied as input, then the PRS will search for rate details with the following order of precedence:

1. Specific Vehicle Category (e.g. ECAR01)
2. Root Car Class (for North America only – US,CA) (e.g. ECAR)

### 3. ACAR

The order of precedence for vehicle category selection is detailed in the Vehicle Category Design Document.

If the requested vehicle category is supplied as input, then the following constraints will be used when querying the RATE\_DETAILS table:

```
RTD      RATE_DETAILS

Reservation DateTime BETWEEN RTD.RES_STRT_DT and RTD.RES_END_DT
Pick-up DateTime BETWEEN RTD.CO_STRT_DT and RTD.CO_END_DT
RTD.AUTH_FLG = 'A'
Vehicle Category = RTD.VCT_CAT_CD
RATE_HDR_ID = RTD.RH_RTH_UNIQ_ID
```

If the requested vehicle category is not supplied as input, all effective vehicle rates defined for the RATE\_HDR\_ID will be retrieved.

If the requested vehicle category is not supplied as input, the following constraints will be used when querying the RATE\_DETAILS table:

```
RTD      RATE_DETAILS

Reservation DateTime BETWEEN RTD.RES_STRT_DT and RTD.RES_END_DT
Pick-up DateTime BETWEEN RTD.CO_STRT_DT and RTD.CO_END_DT
RTD.AUTH_FLG = 'A'
RATE_HDR_ID = RTD.RH_RTH_UNIQ_ID
```

If the rate detail key is supplied as input, the PRS will skip the above steps of rate qualification, rate sharing, and rate retrieval by RATE\_HDR\_ID, and retrieve the unique row from the RATE\_DETAILS table for rate calculation purposes.

If the rate detail key is supplied as input, the following constraints will be used when querying the RATE\_DETAILS table:

```
RTD      RATE_DETAILS

Rate Details Key = RTD.RTD_ID
```

If the rate retrieval query yields no result rows, then a message will be returned to the caller indicating "No valid rates found".

As a part of iteration 3, the rate detail records supported by VRS can be of Time and Mileage rate type or Bid price rate type. Bid price rate type is used by UM locations of ERAC.

The PRS will then calculate the rate adjustment defined for the selected rate header and the specified distribution channel hierarchy. Rate adjustment can be defined as a percentage or an amount. Different percentages or amounts can be defined for the daily rate, weekly rate and monthly rate. The daily, weekly, monthly charge amounts of the selected rate are adjusted (reduced or increased) by the corresponding rate adjustment amounts defined for those charge frequencies. The rate adjustment is always included in a rate returned by PRS. PRS uses the adjusted rate for the calculation of charge frequency counts. The rate adjustment is defined for a given rate header (product + location), an effective date range and for all vehicle car class codes. The distribution channel hierarchy provided by the client is used to select an appropriate rate adjustment record for the selected rate header.

The PRS will then calculate the unit counts (frequency) of each of the vehicle rate components.

The PRS will use the billing cycle supplied as input to determine the unit counts. If the billing cycle input value is set to 'C', then calendar rate calculations will be used. If the billing cycle input value is not set to 'C', then 24-hour rate calculations will be used.

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Calendar day and 24-hour rate calculations would be as follows:

Pick Up	Return	Calendar Days (Calculated)	24 Hour	
Feb 14 10:00 AM	Feb 15 10:00 AM	1 day	1 day	
Feb 14 10:00 AM	Feb 15 10:59 AM	1 day	1 day	59 minute grace period
Feb 14 10:00 AM	Feb 15 11:00 AM	2 days	1 day + 1 hour	
Feb 14 10:00 AM	Feb 15 11:59 PM	2 days	2 days	
Feb 14 10:00 AM	Feb 16 12:00 AM	3 days	2 days	
Feb 14 10:00 AM	Feb 17 10:00 AM	4 days	3 days	

In this example, it is assumed that the hourly rate is one fourth the daily rate.

The PRS will optimize the unit counts of each of the rate components (e.g. use the daily rate until the weekly rate becomes cheaper). In case of a Bid price rate type, 1 day rate, 2 day rate, 3 day rate or 4 day rate is used if the length of rental is 1, 2, 3 or 4 days respectively. If the rental length is between 5 to 7 days then the weekly rate is used. In the case of time and mileage rates, the weekly rate is used if the daily rate multiplied by the number of days of the rental becomes higher than corresponding weekly charge.

The retrieved rate details and calculated unit counts will be used to populate the outputs of the PRS.

The selected rate adjustment amounts are returned as a part of output by PRS. As specified earlier the rate adjustment amounts are already included in a rate amount returned by PRS, so these amounts are for client information only and these amounts need not be stored as a part of the transaction. Client can use this information to generate/display appropriate text message for a customer.

The list of rate records returned by the PRS will be limited to no more than 25.

If the vehicle category is supplied as input, and a valid rate record is returned, then the sub-engines (Coverage Engine, Equipment Engine, General Conditions Engine and Ancillary Charge Engine) can be invoked without user intervention.

### 3.1.3 Special Products Implementation

This document describes the current proposal for implementing the Enterprise 'special' within VRS for Iteration 3. Although the document refers primarily to weekend specials, the proposal applies to non-weekend specials as well.

#### 3.1.3.1 Enterprise Requirements for Specials

Definition of Specials: Specials are the vehicle rates available for limited period of time. In addition, special vehicle rates will have associated qualifications which will allow user to specify the day and time when the special rate is applicable for pick up and return.

- For ERAC, the validity/qualification for the special is applicable for a special rate only. If the user wants to keep the car for a longer period of time, the user is charged the primary standard Retail rate applicable for that pick up location.
- The next requirement is that when the reservation location and the pick up location are the same, the special product is returned even when the pick up date and time are not within the limits of qualifications associated with that Rates\_Header. Under these circumstances, the Enterprise rental agent will decide the date/time of the rental that the special rate is valid and the period of the rental that the primary standard retail rate is valid. The applicability of the rate, charge type and charge frequency will be the same as if we have received two or more independent rate engine transactions.
- Special products/rates are returned by the Rates Engine only if specifically requested by the caller. The caller must provide the rate source of 'S'pecial for the Rates Engine to return the special products.
- All additional charges valid for the rental like coverage charges and equipment will not be defined for the special product type. For a given transaction, the coverage charges and equipment rates will be the same as those defined for the product type of 'R'etail.

#### 3.1.3.2 Design Considerations/Constraints

Specials will be designated by the product type of 'S' for special.

Specials will be returned by Rates Engine when the input product type/rate source is 'S'pecial.

For reservations other than those made at the pickup branch, the special products are returned as a valid product by rate engine only if all the qualifications for pick up day/time and minimum/maximum days of the rental are satisfied.

#### 3.1.3.3 Detailed Design Approach

Under this proposal, two separate products will potentially be used to return a special rate (like weekend rate) (if available and applicable). The weekend special product specifies which days of the week are considered weekend days and what the rates for those days are. The primary standard retail rate applicable at a given pick up location will be used for any rental days that fall outside the special period.

### 3.1.3.4 Weekend Special Business Rules and Requirements

The VRS rates engine will only attempt to retrieve weekend special type rates if the input rate source is "S" (Special).

There are two sets of rates associated with a weekend special. The first set of rate represents the daily rate associated with rental days that fall within the weekend period defined by the associated rate qualification. The second set of rates cover any rental days that fall outside the weekend period.

The weekend specific rates will be maintained for the weekend special product. The rates for any days that fall outside the weekend period will be retrieved from the primary retail product applicable at the pick up branch.

The user responsible for setting up weekend specials will use the VRS rate qualification to define when the weekend rates first apply (earliest pick up day of week and time), and the day of week the weekend rates end. The weekend special specific fields on the VRS rate qualification are :

***Earliest Pick Up Day of Week***  
***Earliest Pick Up Time of Day***

***Latest Pick Up Day of Week***  
***Latest Pick Up Time of Day***

***Return Latest Day of Week***

The VRS rates engine will use the fields listed above to determine if weekend special rates are applicable in a given rental situation and which days of a rental the weekend rates apply.

The pick up earliest day of week and time generally describes the earliest point in a week that the weekend special is available for rental. If the reservation source is the same as the pick up branch, the counter agent will have the option of overriding the pick up earliest day of week and time. These fields also define when the weekend rates first apply.

The pick up latest day of week and time specifies the latest point in a week that a weekend special is available for pick up. This value is normally set to one day prior to the return latest day of week.

The return latest day of week and the pick up time of the rental transaction (if return day is beyond the special end day of week) marks the end of the weekend period. Any portion of a rental that goes beyond this is charged at the applicable primary retail rate for the pick up branch.

The rules regarding the earliest pick up day of week and time depend upon the reservation source (distribution channel) used for the rental transaction, as explained below,

**If the reservation source is anywhere other than the pickup branch, the following rules apply:**

If the input pick up day of week and time is prior to the earliest pick up day of week and time on the qualification, a message will be returned indicating no applicable special products were found.

If the input pick up day of week and time is within the pick up and earliest and latest day of week and time specified on the qualification, the rates engine will return both the weekend special rate and the rate for the primary retail product for the given pick up branch. The retrieval of the primary retail rate will be transparent to the end user other than the fact that it is available.

The return latest day of week on the rate qualification is not used to determine product applicability. The renter can return the vehicle after the return latest day of week and still qualify for the rental. The primary retail rate for the pick up location will apply to the portion of the rental that goes past the return latest day of week.



If the reservation source is the pickup branch, the following rules apply:

If the input pick up day of week and time is prior to the earliest pick up day of week and time on the qualification, the rates engine will return both the weekend special rate and the rate for the primary retail product for the given pick up branch. A message will be returned to the user indicating that the rental period begins prior to the pick up earliest day of week and/or time on the qualification. The agent will then have the option of either disregarding the message and allowing the rental, or calling the rates engine again with a rate source other than "S".

If the input pick up day of week and time is within the pick up earliest and latest day of week and time specified on the qualification, the rates engine will return both the weekend special rate and the rate for the primary retail product for the given pick up branch.

As with the case where the reservation source is other than the pick up branch, the return latest day of week on the rate qualification is not used to determine product applicability. The renter can return the vehicle after the return latest day of week and still qualify for the rental. The primary retail rate for the pick up location will apply to the portion of the rental that goes past the return latest day of week.

### 3.1.3.5 Scenarios

Pick up and Return Qualification for the special product is specified as:

#### ***Weekend Special***

Qual Pick Up Earliest Day of Week:	Thursday
Qual Pick Up Earliest Time:	12:00 noon
Qual Return Latest Day Of Week:	Monday

Weekend Special Daily Rate:	12.00
-----------------------------	-------

No hourly rate for the special Product.

#### ***Primary Retail Rate***

Standard Retail Daily Rate:	20.00
Standard Retail Hourly Rate:	10.00

(For this scenario assume that there is no weekly or monthly rate)

**API modification for PRS service to support Special Product :**

New rate engine output fields have been created to explicitly store special daily rate amounts, special daily duration counts and before special period day and week duration counts. The before special period day and week duration count (*before\_day\_count* and *before\_week\_count*) fields will be used to store the day and week durations preceding the special period. Post special durations counts will be stored in the existing day/week/Month rental count fields.

In addition to the above modifications, two additional fields will be added to represent special validity date range for the transaction under consideration.

EARLIEST\_SPECIAL\_START\_DT\_TM

and

LATEST\_SPECIAL\_END\_DT\_TM

### 3.1.3.5.1 Scenario 1

This scenario shows a simple case where the entire rental period falls within the pick up earliest and return latest days specified on the associated qual. The reservation agent has requested a Special.

#### Res and Rental Info

Reservation Source:	Other than pick up branch
Pick Up Day of Week per Reservation:	Thursday
Pick Up Time per Reservation:	1:00 p.m.
Return Day of Week per Reservation:	Monday
Return Time per Reservation:	11:00 a.m.

#### Rates Engine Response

The rates engine would retrieve both the weekend special rates: \$12.00/day and the primary retail rate \$20.00/day - \$10.00/hour. These rate were returned because:

A weekend special product had rates available at the input pick up location.

The user requested a Special

The input pick up day of week and time was greater than or equal to the earliest pick up day of week and time on the Special rate qualification.

Four rental days fell within the special period defined on the qualification and were charged at the special rate of \$12.00/day

Since the rental was completely within the weekend period specified on the qualification, the primary retail rate was not used.

**Scenario 1 Rates Engine Output**

PRS - Output Parameter	Value
engine_error	0
engine_message	All OK
user_info_message	OK
rental_duration_days	4
rental_duration_hours	94
drop_fee	0.00
fuel_unbld_amt	0.00
num_records	1
vehicle_category	ECAR
rate_detail_key	21
total_seat_price	48.00
total_free_miles	0
excess_mileage_fee	0.00
hourly_count	0
hourly_rate	10.00
hourly_miles	0
daily_count	0
daily_rate	20.00
daily_miles	0
weekly_count	0
weekly_rate	0.00
weekly_miles	0
monthly_count	0
monthly_rate	0.00
monthly_miles	0
extra_hourly_count	0
extra_hourly_rate	0.00
extra_hourly_miles	0
extra_daily_count	0
extra_daily_rate	0.00
extra_daily_miles	0
qual_id	14
earliest_co_dow	THU
earliest_co_time	43200
latest_ci_dow	MON
min_days	0
max_days	999
min_charge_days	0
Earliest Special start dt	200108091300
Latest Special end dt	200108131300
Special_daily_count	4
Special_daily_rate	12.00
Special_daily_miles	0
Before_day_count	0
Before_week_count	0

Pick up dt-tm  
Return dt-tim

200108091300  
200108131100

Rates from the Primary Standard  
Default Retail Product

**3.1.3.5.2 Scenario 2**

This scenario shows a case where the pick up day of week and/or time for the rental is prior to the earliest pick up day of week and/or time specified on the associated qual. The reservation agent has requested a Special. No special rates will be returned. At this point, the reservation agent will probably attempt the reservation with a different input rate source (i.e. Retail).

**Res and Rental Info:**

Reservation Source:	<b>Other than pick up branch</b>
Pick Up Day of Week per Reservation:	<b>Thursday</b>
Pick Up Time per Reservation:	<b>10:00 a.m.</b>
Return Day of Week per Reservation:	<b>Monday</b>
Return Time per Reservation:	<b>10:00 a.m.</b>

**Rates Engine Response:**

The rates engine would return a message indicating no applicable product or rates found. This message was returned because:

The pickup time passed by the caller was earlier than the pick up earliest time on the qual

The reservation source was other than the pick up branch

**Scenario 2 Rates Engine Output**

PRS - Output Parameter	Value
engine_error	16401
engine_message	No applicable specials
user_info_message	OK
rental_duration_days	4
rental_duration_hours	96
drop_fee	0.00
fuel_unbld_amt	0.00
num_records	0
vehicle_category	Null
rate_detail_key	0
total_seat_price	0.00
total_free_miles	0
excess_mileage_fee	0.00
hourly_count	0
hourly_rate	0.00
hourly_miles	0
daily_count	0
daily_rate	0.00
daily_miles	0
weekly_count	0
weekly_rate	0.00
weekly_miles	0
monthly_count	0
monthly_rate	0.00
monthly_miles	0
extra_hourly_count	0
extra_hourly_rate	0.00
extra_hourly_miles	0
extra_daily_count	0
extra_daily_rate	0.00
extra_daily_miles	0
qual_id	0
earliest_co_dow	0
earliest_co_time	0
latest_ci_dow	0
min_days	0
max_days	0
min_charge_days	0
Earliest Special start dt	
Latest Special end dt	
Special_daily_count	0
Special_daily_rate	0.00
Special_daily_miles	0
Before_day_count	0
Before_week_count	0

*Pick up dt-tm*  
*Return dt-tim*200108091000  
200108130800

### 3.1.3.5.3 Scenario 3

This scenario shows a case where the rental begins within the pick up earliest and latest period specified on the associated qualification, but ends after the return latest day of week. The reservation agent has requested a Special. The total price returned by the rates engine will be a combination of the weekend rate and the primary retail rate.

#### Res and Rental Info:

Reservation Source:	Other than pick up branch
Pick Up Day of Week per Reservation:	Friday
Pick Up Time per Reservation:	1:00 p.m.
Return Day of Week per Reservation:	Tuesday
Return Time per Reservation:	11:00 a.m.

#### Rates Engine Response:

The rates engine would return 3 days at the \$12.00/day weekend special rate (Friday through Monday) and one day at the \$20.00/day primary retail rate (Monday to Tuesday). This rate was returned because:

- A weekend special product had rates available at the input pick up location.
- The user requested a Special
- The input pick up day of week and time was greater than or equal to the earliest pick up day of week and time on the Special rate qualification.
- Three of the rental days fell within the special period defined on the qualification and were charged at the special rate of \$12.00/day
- One of the rental days at the end of the rental fell outside the weekend period and was charged at the primary retail rate of \$20.00/day.

### Scenario 3 Rates Engine Output

PRS - Output Parameter	Value
engine_error	0
engine_message	All OK
user_info_message	OK
rental_duration_days	4
rental_duration_hours	94
drop_fee	0.00
fuel_unbid_amt	0.00
num_records	1
vehicle_category	ECAR
rate_detail_key	21
total_seat_price	56.00
total_free_miles	0
excess_mileage_fee	0.00
hourly_count	0
hourly_rate	10.00
hourly_miles	0
daily_count	1
daily_rate	20.00
daily_miles	0
weekly_count	0
weekly_rate	0.00
weekly_miles	0
Monthly_count	0
Monthly_rate	0.00
Monthly_miles	0
extra_hourly_count	0
extra_hourly_rate	0.00
extra_hourly_miles	0
extra_daily_count	0
extra_daily_rate	0.00
extra_daily_miles	0
qual_id	14
earliest_co_dow	THU
earliest_co_time	43200
latest_ci_dow	MON
min_days	0
max_days	999
min_charge_days	0
Earliest Special start dt	200108091300
Latest Special end dt	200108131300
Special_daily_count	3
Special_daily_rate	12.00
Special_daily_miles	0
Before_day_count	0
Before_week_count	0

Pick up dt-tm  
Return dt-tim

200108101300  
200108141100

### 3.1.3.5.4 Scenario 4

This scenario illustrates the case where the counter agent overrides the **earliest pick up time** on the associated qual. The agent has requested a Special. Note that in this example, the vehicle is picked up on the same calendar day as the pick up earliest day of week on the qualification. The actual pick up time is prior to the pick up earliest time on the qualification.

#### *Res and Rental Info:*

Reservation Source:	Pick up branch
Pick Up Day of Week per Reservation:	Thursday 200108091000
Pick Up Time per Reservation:	10:00 a.m.
Return Day of Week per Reservation:	Monday 200108130800
Return Time per Reservation:	8:00 a.m.

#### *Rates Engine Response:*

*The rates engine will return a message indicating that the rental start day of week and/or time is prior to the pick up earliest day of week and time of the special as defined on the associated qual. The agent specifically requested a Special. Should the counter agent decide not to extend any special rates after viewing the message, the input rate source can be changed (i.e. Retail) and the rates engine called again.*

The rates engine would return four days at the \$12.00/day weekend special rate (Thursday through Monday). This rate was returned because:

- A weekend special product had rates available at the input pick up location.
- The user requested a Special
- Although the input pick up time was prior to the pick up earliest time on the qualification, the counter agent was given the option of overriding the qualification restrictions since the reservation source was the pick up branch. The counter agent decided to extend the weekend rates on the applicable days.
- Since the actual pick up day of week and the earliest pick up day of week on the qual were the same (the vehicle was picked up 2 hours early), the special rate applied for every day of the rental. The earliest special start time (and consequently the latest special end time) were implicitly changed to the actual pick up time for this rental.



## Scenario 4 Rates Engine Output

PRS - Output Parameter	Value
engine_error	0
engine_message	All OK
user_info_message	Earliest pickup qualification not met
rental_duration_days	4
rental_duration_hours	94
drop_fee	0.00
fuel_unbid_amt	0.00
num_records	1
Vehicle_category	ECAR
rate_detail_key	21
total_seat_price	48.00
total_free_miles	0
Excess_mileage_fee	0.00
hourly_count	0
hourly_rate	10.00
hourly_miles	0
daily_count	0
daily_rate	20.00
daily_miles	0
Weekly_count	0
Weekly_rate	0.00
Weekly_miles	0
Monthly_count	0
Monthly_rate	0.00
Monthly_miles	0
extra_hourly_count	0
extra_hourly_rate	0.00
extra_hourly_miles	0
extra_daily_count	0
extra_daily_rate	0.00
extra_daily_miles	0
qual_id	14
Earliest_co_dow	THU
Earliest_co_time	43200
latest_ci_dow	MON
min_days	0
max_days	999
min_charge_days	0
Earliest Special start dt	200108091000
Latest Special end dt	200108131000
Special_daily_count	4
Special_daily_rate	12.00
Special_daily_miles	50.00
Before_day_count	0
Before_week_count	0

Pick up dt-tm  
Return dt-tim

200108091000  
200108130800

### 3.1.3.5.5 Scenario 5

This scenario illustrates the case where the counter agent overrides the **earliest pick up day of week** on the associated qual and offers the weekend special rate for a portion of the rental. The agent has requested a Special. In this example, the vehicle is picked up one calendar day early.

#### Res and Rental Info:

Reservation Source:	Pick up branch (Walk Up)
Pick Up Day of Week per Reservation:	Wednesday
Pick Up Time per Reservation:	3:00 p.m.
Return Day of Week per Reservation:	Monday
Return Time per Reservation:	11:00 a.m.

#### Rates Engine Response:

*The rates engine will return a message indicating that the rental start day of week and/or time are prior to the earliest start day of week and time of the special as defined on the associated qual. The agent specifically requested a Special. Should the counter agent decide not to extend any special rates after viewing the message, the input rate source can be changed (i.e. Retail) and the rates engine called again.*

- The rates engine would return one day at the \$20.00/day primary retail rate (Wednesday to Thursday) and 4 days at the \$12.00/day weekend special rate (Thursday through Monday). This rate was returned because:
  - A weekend special product had rates available at the input pick up location.
  - The user requested a Special
  - The reservation location and pick-up location were the same.
- Although the pick up day of week was prior to the pick up earliest day of week on the qual, the counter agent was given the option of overriding the qual restrictions since the reservation source was the pick up branch. The agent decided to extend the weekend rates on the applicable days.
- Four of the rental days fell within the special period defined on the qual (Thursday 3:00 through Monday) and were charged at the special rate of \$12.00/day
- The first day of the rental (Wednesday 3:00 through Thursday 3:00) started prior to the pick up earliest day of week on the qual. The primary retail rate was charged for this rental day.

## Scenario 5 Rates Engine Output

PRS - Output Parameter	Value
engine_error	0
engine_message	All OK
user_info_message	Earliest pickup qualification not met
rental_duration_days	5
rental_duration_hours	116
drop_fee	0.00
fuel_unbld_amt	0.00
num_records	1
vehicle_category	ECAR
rate_detail_key	21
total_seat_price	68.00
total_free_miles	0
excess_mileage_fee	0.00
hourly_count	0
hourly_rate	10.00
hourly_miles	0
daily_count	0
daily_rate	20.00
daily_miles	0
weekly_count	0
weekly_rate	0.00
weekly_miles	0
monthly_count	0
monthly_rate	0.00
monthly_miles	0
extra_hourly_count	0
extra_hourly_rate	10.00
extra_hourly_miles	0
extra_daily_count	0
extra_daily_rate	0.00
extra_daily_miles	0
qual_id	14
earliest_co_dow	THU
earliest_co_time	43200
latest_ci_dow	MON
min_days	0
max_days	999
min_charge_days	0
Earliest Special start dt	200108091500
Latest Special end dt	200108131500
Special_daily_count	4
Special_daily_rate	12.00
Special_daily_miles	50.00
Before_day_count	1
Before_week_count	0

Pick up dt-tm  
Return dt-tim

200108081500  
200108131100

Note: In this scenario, the before\_day\_count indicates the number of days to charge the standard retail rate for this transaction (1 x day at \$20).

### 3.1.3.5.6 Scenario 6

This scenario illustrates the case where the counter agent overrides the **earliest pick up day of week** on the associated qualification and offers the weekend special rate for a portion of the rental. In this scenario, the rental also extends past the return latest day of week. The agent has requested a Special. In this example, the vehicle is picked up one calendar day early.

#### Res and Rental Info:

Reservation Source:	<b>Pick up branch (Walk Up)</b>
Pick Up Day of Week per Reservation:	<b>Wednesday</b>
Pick Up Time per Reservation:	<b>3:00 p.m.</b>
Return Day of Week per Reservation:	<b>Tuesday</b>
Return Time per Reservation:	<b>11:00 a.m.</b>

#### Rates Engine Response:

*The rates engine will return a message indicating that the rental start day of week and/or time are prior to the earliest start day of week and time of the special as defined on the associated qual. The agent specifically requested a Special. Should the counter agent decide not to extend any special rates after viewing the message, the input rate source can be changed (i.e. Retail) and the rates engine called again.*

The rates engine would return two days at the \$20.00/day primary retail rate (Wednesday to Thursday and Monday to Tuesday) and 4 days at the \$12.00/day weekend special rate (Thursday through Monday). This rate was returned because:

- A weekend special product had rates available at the input pick up location.
- The user requested a Special
- Although the pick up day of week was prior to the pick up earliest day of week on the qual, the counter agent was given the option of overriding the qual restrictions since the reservation source was the pick up branch. The agent decided to extend the weekend rates on the applicable days.
- Four of the rental days fell within the special period defined on the qual (Thursday 3:00 through Monday) and were charged at the special rate of \$12.00/day
- The first day of the rental (Wednesday 3:00 through Thursday 3:00) started prior to the pick up earliest day of week on the qualification. The last day of the rental (Monday to Tuesday) fell outside the return latest criteria on the qualification. The primary retail rate was charged for these two rental days.
- Since the actual pick up day of week was overridden, the primary retail rate was charged for the first day of the rental. The weekend rate was charged for subsequent days.

## Scenario 6 Rates Engine Output

PRS - Output Parameter	Value
engine_error	0
engine_message	All OK
user_info_message	Earliest pickup qualification not met
rental_duration_days	6
rental_duration_hours	140
drop_fee	0.00
fuel_unbid_amt	0.00
num_records	1
vehicle_category	ECAR
rate_detail_key	21
total_seat_price	88.00
total_free_miles	0
excess_mileage_fee	0.00
hourly_count	0
hourly_rate	10.00
hourly_miles	0
daily_count	1
daily_rate	20.00
daily_miles	0
weekly_count	0
weekly_rate	0.00
weekly_miles	0
monthly_count	0
monthly_rate	0.00
monthly_miles	0
extra_hourly_count	0
extra_hourly_rate	0.00
extra_hourly_miles	0
extra_daily_count	0
extra_daily_rate	0.00
extra_daily_miles	0
qual_id	14
earliest_co_dow	THU
earliest_co_time	43200
latest_ci_dow	MON
min_days	0
max_days	999
min_charge_days	0
Earliest Special start dt-tm	200108091500
Latest Special end dt-tm	200108131500
Special_daily_count	4
Special_daily_rate	12.00
Before_day_count	1
Special_daily_miles	50.00
Before_week_count	0

Pick up dt-tm  
Return dt-tm

200108081500  
200108141100

Note: In this scenario, the before\_day\_count captures the day count preceding the special period and indicates the number of days to charge the standard retail rate for this transaction (1 x day at \$20). The day\_count value captures the day count succeeding the special period and indicates the number of days to charge the standard retail rate for the transaction (1 x day at \$20).

### 3.1.3.6 Qualification Override Rules (For Open Ticket and Counter Agent)

If the counter agent chooses to allow a weekend special to go out prior to the pick up earliest day of week and time on the qual, the following default rules apply:

*If the actual pick up day of week is the same as the pick up earliest day of week on the qual (Only the pick up time has been moved forward):*

- The pick up earliest time implicitly becomes the actual pick up time for this rental
- The weekend rate applies to the entire first day of the rental

#### Example

Qual Pick Up Earliest Day of Week: **Thursday**  
Qual Pick Up Earliest Time: **12:00 noon**  
Qual Return Latest Day Of Week: **Monday**

Actual Pick Up Day of Week: **Thursday**  
Actual Pick Up Time of Day: **9:00 a.m.**  
Actual Return Date: **Monday**

Given the scenario above, the weekend rate would be charged for the entire duration of the rental. The Pick Up Earliest Time of Day on the qualification was *implicitly* changed to 9:00 a.m. for this rental.

*If the actual pick up day of week is prior to the pick up earliest on the qualification:*

- The primary retail rate is charged for each 24 hour period on the rental prior to the pick up earliest day on the qualification
- The weekend rate is charged for each rental day that begins within the pick up earliest day of week and return latest day of week

#### Example

Qual Pick Up Earliest Day of Week: **Thursday**  
Qual Pick Up Earliest Time: **12:00 noon**  
Qual Return Latest Day Of Week: **Monday**

Actual Pick Up Day of Week: **Wednesday**  
Actual Pick Up Time of Day: **9:00 a.m.**  
Actual Return Date: **Monday**

Given the scenario above, the primary retail rate would be charged for the first 24 hour period. After this time, the rental falls within the pick up earliest and return latest days of week, and the weekend rate would be charged for the remainder of the rental.

The above rules outline default processing when the pick up earliest day of week and/or time is overridden. It is assumed that the reservation/open ticket user interface screen will allow the agent to change the primary retail/weekend rate allocations if a given rental situation warrants.

## 4 Key Risks, Assumptions and Issues

### 4.1 Risks

#### 4.1.1 Products

#### 4.1.2 Rate Engine

### 4.2 Assumptions

#### 4.2.1 Products

1. VRS currently attaches rate qualification rules to a rate header. These rules apply to all car classes offered by that rate header. Current VRS will meet Enterprise's business need without being modified to attach rate qualification rules at the car class level.
2. NatRes Deposit, Misc., Mileage, and Guarantee rules can be accommodated with VRS messaging.
3. The current VRS method of defining the length of a rental week and rental month meets ERAC's business need.
4. The VRS pricing engine will search the reservation applicability table (prod\_avls) for an exact match based on input distribution channel passed by the caller and product location (User Defined Area Name and Type) as defined on the selected rate header.
5. The VRS pricing engine will traverse applicable entries in the distribution channel hierarchy when searching for a match in the rate adjustments table. The location portion of the search will require an exact match on user defined area name and type retrieved from Rates\_Header table after traversing the location hierarchy.
6. Setting up new (post conversion) bid pricing rate headers will be a manual process. The NatRes to VRS bid price bridge process will verify that any rate updates coming across the bridge have a matching VRS rates header. Any updates not having a matching VRS rates header will be written to an error file and no rate update will occur.
7. All rate updates to bid price rates will occur through the NatRes to VRS rate bridge. Mileage limits and excess mileage amounts may be maintained in VRS if needed.
8. Bid price mileage limits will be established at conversion time.
9. Rate Header Discount Y/N flag applies to discounts only; it does not effect distribution channel based rate adjustments.
10. Walk up will not be a separate distribution channel.
11. Caller will pass applicable portion of distribution channel hierarchy to VRS pricing engine (i.e. If renter initiated reservation using Travelocity, caller would pass GDS, Sabre, Travelocity).
12. Conversion of pick up/return rules will be a manual process
13. Scenarios and illustrations in this document used legacy keys for user defined area name for illustration purposes. Actual keys will consist of PeopleSoft code. No "intelligence" is implied by the UDA name. A separate process will be responsible for verifying that the a given branch is inserted into the appropriate user defined areas.
14. For user defined area level Rates\_Header all the BRANCHES belonging to that user defined area should have the same currency.
15. The Discountable Flag on the Rates\_Header applies to Discount only, and not to the Rate Adjustments.

#### 4.2.2 Rate Engine

1. The interfaces for the APS and PRS are described in this document. It will be the callers responsibility to determine when to call these services, and to ensure that the pertinent inputs are supplied.
2. The Rate Engine will not perform currency conversion. All currency related data will be set-up in the same currency across all tables per instance. *Answer: Mary to confirm.*
3. PRS optimization will be based on actual charged durations.

#### 4.2.2.1 APS

#### 4.2.2.2 PRS

1. There will be no point-to-point validation for oneway rentals.
2. The call mode input values of RO, RM, CO, AR, CI, AI do not cause the PRS to behave differently. The are all treated the same. Each call to the rate engine will be considered a new call.

#### 4.2.2.3 Specials

1. Rate Engine output for specials need to be transformed multiple start date and end dates and corresponding rate amounts for presentation to GUI as well as for call to the Charge Engine. The rules for this presentation are,

If rental pick up time < special start date-time  
Rental transactions has before special period and charge.  
If rental return time > special end date-time  
Rental transaction has after special period and charge.

Special validity period for the transaction is indicated by special start date-time and special end date-time.

Special start day of week and time as defined for the special rate (and not necessarily for this transaction) is indicated by qualification data fields in the form of earliest pick up day of week, earliest pick up time and return latest day of week.

2. If the rental has a before special period, then the special start time will always be a 24 hour increment from the corresponding pick up time.
3. If the rental has an after special period then the special end time will always be a 24 hour increment from the corresponding pick up time. In other words, the fraction period of rental (in terms or hours) will always be towards the end of the transaction when transaction uses different rate types as in case of specials.
4. Portion of the rental period before and after the special validity period are optimized independently even though same daily rate may be valid for both portions. Eg. If we have 1 day before and 5 days after, the Rate Engine will not offer the weekly rate even though it will be cheaper than 6 times the daily rate.
5. Billing cycle for the transaction involving special rate is always 24 hour billing for entire transaction.
6. There is no hourly rate for the special product.



7. Excess mileage charge for the entire transaction will be used from the Primary retail product offered on the transaction.
8. Mileage allowances will be retrieved from special and retail products for the period of rental where special and retail rates are valid.

## 4.3 Issues

### 4.3.1 Products

1. Conversion of pick up/return rules will be challenging and needs to be carefully planned and executed
2. Triggers/Events for the NRA synchronization and other architectural details required for synchronization process need to be defined.
3. The architecture for error reporting as it applies to the Synchronization process is still being defined.
4. We need to investigate how ship rate to SAFECO functionality will be supported by VRS.
5. The table layout for the distribution channel hierarchy and where it resides and which functional domains will have access to it needs to be specified. The current assumption is that ERAC will define this table.

### 4.3.2 Rate Engine

#### 4.3.2.1 Specials

1. As per current assumptions, we will always default return latest time to whatever has been specified as pick time for the transaction under consideration. ERAC has expressed the desire to use the latest return time if provided in a data and apply accordingly. Our current design proposal does not support that requirement, even though we have the data structure (DataBase) to represent that information.
2. We need to present different business scenario's and identify the processing rules for each of those scenario to fully define the behavior of PRS and optimization routine with return latest time specified as a part of the rate qualification.
3. The dates/times of the charge periods will need to be adjusted from planned date/time to the actual date/time by the GUI.
4. For the optimization of rate counts, in case of bid price rates, we will always apply 1,2,3,4 day rate as per the rental duration of the transaction. We will always switch to Weekly rate for rental duration between 5 and 7. For other Time and Mileage rates we will use the weekly rate as soon as number of days times daily rate becomes higher than corresponding weekly rate.
5. Our current assumption of returning an error, if special is not valid, may force NATRES to make two separate calls so that NATRES can return corresponding retail rate under that scenario.
6. The business rule which has been defined as part of the ERAC implementation of VRS, where the special rate is offered only if rate type of special is specifically requested, needs to be evaluated for NATRES. The business rule implemented does not match current NATRES behavior.

## 5 Appendices

### 5.1 Products – Data Model

Please reference file ProductErd.doc

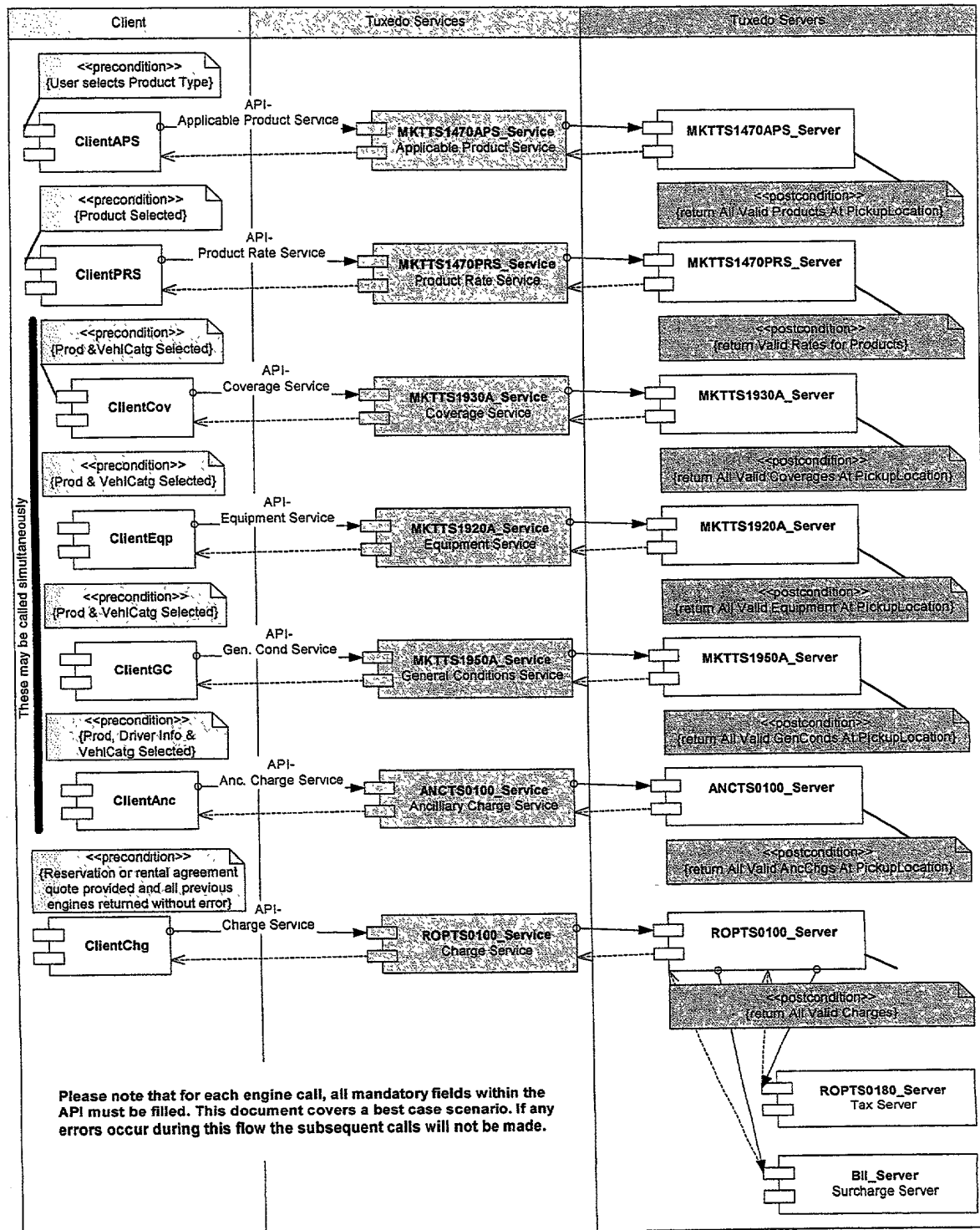
### 5.2 Rates – Data Model

Please reference file RatesErd.doc

### 5.3 Rates Detail – Data Model

Please reference file RateDetailErd.doc

## 5.4 VRS Process Flow Model





ECARS V2.0  
Accurate Out the Door Pricing

Detailed Design Specification  
Coverage Engine  
Iteration 3 - Final

**perotsystems™**

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## Gaps Addressed Summary

Gap ID	Functional Area	Brief Description
90	Coverage	Need ability to price coverage types and additional products (ancillary items) by some combination of location and default type.
91	Coverage	Enterprise car class definition is potentially composed of two components: a car class and a car class suffix. VRS rate detail does not support any sort of car class suffix.
118	Coverage	Offer weekly, monthly and maximum per rental charge for coverage types.
128	Coverage	Need to accommodate station overrides for coverage types. For ex. A contract can specify coverage charges for a specific coverage but the station might never offer this.
129	Coverage	Need the ability to support Staggered rates for stations that need to charge a certain amount for x number of days and then another amount from that point on.
130	Coverage	Need a new table to store state mandated limits. The stat mandated limit needs to be returned as an output from the coverage engine. Only Daily amounts will be retrieved

## Document Control

### Primary Document Owner/Domain

Issued by: (PSC)

Name	Position/Department	Signature	Date
Nitin Palsule	Manager Rate Engine/Sub Engines		

### Customer Approval

Authorized by: (ERAC)

Name	Position/Department	Signature	Date

### Document History

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Version	Date	Author	Reason for Change
1.0	05/14/01	Robert Srodulski	Initial draft of Design Document
1.1	05/18/01	Robert Srodulski	Edit from feedback – Internal Review
1.2	05/21/01	Robert Srodulski	Merge Use Case format into standard design template.
1.3	06/07/01	Robert Srodulski	Updates from External Design review
1.4	06/13/01	Robert Srodulski	Added Standard Header Reference.
1.5	06/14/01	Robert Srodulski	Added Design for State Mandated Limits.
2.0	08/30/01	Robert Srodulski	Added all Addendum information to baseline document.
2.1	09/10/01	Robert Srodulski	Change to Section 3.1.1 Input API. Country code field changing from 3 to 4 for Iteration 3.
2.2	11/01/01	Robert Srodulski	Iteration 3 – Final

# 1 Introduction

## 1.1 Overview

The purpose of this document is to provide detailed design specifications of how the coverage engine component of the Vehicle Rental System (VRS) will be utilized in providing coverage types and charges in the retail line of business. This will reflect the complete design at a high level with reference to the gaps that will be delivered in iteration 2. This document is specifically for the coverage engine.

In VRS (Vehicle Rental System) the Insurance Types (INS\_TYPS) and Insurance Provisions (INS\_PRVS) tables are the two main entities used to satisfy the coverage (protection) related requirements of a rental transaction.

These entities allow users to classify and relate a set of standard and customized coverage types by associating them with combinations of product type, and/or product instance, location based rate hierarchy and vehicle category.

The coverage engine of VRS is used to retrieve the set of applicable coverage types and charges along with the appropriate applicability status for a specified set of input parameters.

The design details of these data base entities and their associated engine functionality, as it applies to the Retail-SI business type of ERAC, are described in the following sections.

## 1.2 Dependencies

Dependencies with ERAC's test windows.

## 1.3 Data Conversion

High level impacts to data conversion. A separate document will be published for data conversion design.

## 1.4 Impact Analysis

This section is not applicable for Iteration 2. This section will be relevant for subsequent iterations to track the differences between iteration 3 and 2, iteration 4 and 2 and so on.



## 2 Design Specifications – Data Components/Setup

### 2.1 Coverage Engine

#### 2.1.1 Insurance Types Use Case

The following defines information that pertains to this particular use case. Each piece of information is important in understanding the purpose behind the use case.

<b>Goal In Context:</b>	ERAC user maintains the coverage types in the ECARS Insurance Type table.
<b>Scope:</b>	This use case deals with insert/update activity on the Insurance Type and Insurance Packages tables. The main actor is the User responsible for maintaining this information.
<b>Level:</b>	Sub functionality
<b>Pre-Condition:</b>	<ol style="list-style-type: none"><li>1. CRY5 entity pre-populated with all the relevant country codes.</li><li>2. RRA_CHG_TYPS pre-populated with all relevant charge types.</li></ol>
<b>Success End Condition:</b>	Coverage type record created with appropriate database constraints defined for Insurance Type entity.
<b>Failed End Condition:</b>	Coverage type record not created.
<b>Primary Actor:</b>	The main actor is the user responsible for maintaining this information.
<b>Trigger Event:</b>	Requirement to create new coverage type and/or super type.

##### 2.1.1.1 Main Success Scenario - Create Insurance Types Records

###### 2.1.1.1.1 User Creates Coverage Type

The insurance types entity stores unique coverage type id's for a specific country code. ERAC specifies the charges for these coverage types in association with a rental product and/or contractual conditions. The detail of how the pricing is done is covered in a separate use case document.

Coverage types are classified as insurances that are similar in nature but offer different levels of protection for a specific country. Insurance super types are used to indicate related coverage types within VRS.

Another way of defining coverage is a package coverage type, which is offered as a group of different coverage types for a country and priced as a single coverage item.

Additionally, the ability to define 'state mandated' limits is covered.

The details of how these different coverage types are structured within the VRS data model is explained below:

User creates the coverage type record into INS\_TYP table.

In the VRS data model, the INS\_TYPS table stores all the valid coverage type codes for a specific country. Each coverage type has a description that can be stored in two attributes 75 char wide called ins\_cnd\_ln1 and ins\_cnd\_ln2. In addition, for each coverage type there is a valid pre-defined charge type value. The charge engine uses this at the time of tax calculation and charge allocation. We also store the audit information in the form of create user id and create date-time for this record as well as the user id and date-time of the last modification.

Record created with some coverage types described

Country	Insurance Type	Insurance Type Description	Charge Type	Super Type Code	Super Type Order Number	Package ID
DE	CDW	Collision Damage Waiver	00006	CDW	1	
US	CDW1	Collision Damage Waiver Full	00006	CDW	1	
US	CDW2	Collision Damage Waiver \$3000	00006	CDW	2	
US	CDW3	Collision Damage Waiver \$5000	00006	CDW	3	
CA	PAI	Personal Accident Ins	00007	PAI	1	

#### 2.1.1.1.2 Creation of Insurance Super Types

Insurance super types designate the coverage types which offer the same coverage but with varying degree of details. For example, user may want to create the three different flavors of Collision Damage Waiver (CDW), as in the preceding table, each with different deductible amounts. The Insurance super type indicator identifies all the coverage types that are similar while the insurance super type order number indicates the priority order for each coverage type. If one of a group of coverage types that are related by a common insurance super type needs to be included in any package (group of coverage types) then only the coverage type with highest priority would be included as a part of that package.

At the time of rental user can select only one of the coverage types if two or more coverage types offered have same insurance super type.

### 2.1.1.1.3 Insurance Package Creation

Insurance packages are extensions of coverage types that group two or more of the standard coverage types together as a part of one package.

After creation of a coverage type as discussed above the user will be given the option to create a package. This should present to the user a list of coverage types to add. Once all types have been added the user maintenance forms should update the coverage type row in the INS\_TYPS table with the Package ID created.

The Example below shows the creation of the Peace of Mind (POM) package which consists of CDW and PAI. The tables below show the results.

Insurance Types Table (INS\_TYPS)

Country	Insurance Type	Insurance Type Description	Charge Type	Super Type Code	Super Type Order Number	Package ID
US	CDW1	Collision Damage Waiver	00006	CDW	1	
US	PAI	Personal Accident Insurance	00007	PAI	1	
US	POM	Peace of Mind Package	00033	POM	1	3

Insurance Packages Table (INS\_PKGS)

Package Id	Country	Insurance Type	Insurance Super Type	Description
3	US	CDW1	CDW	Collision Damage Waiver
3	US	PAI	PAI	Personal Accident Insurance

Note that the Package ID of 3 has been written back to the POM record within the INS\_TYPS table.

#### Additional Rules:

- Packages can only be made up of coverage types from the same country.
- Only 1 common super type may be used. (i.e. CDW1 and CDW2 may not be combined into 1 package).

### 2.1.1.1.4 State Mandated Limits

State mandated limits allow users to store the maximum daily charge limit by coverage type as defined by that state. After creation of a coverage type the ability to enter in any state mandated limit should be provided. This should allow the user to select which state to add the amount of the maximum daily limit.

The example below will show a limit being added for the state of Georgia.

Mandated ID	Country	Insurance Super Type	UDA Type	UDA	Daily Rate	Start Date	End Date
1	US	PAI	ATY_ST	GA	3.99	01/01/2001	12/31/2037

**Additional Rules and Information:**

- The UDA Type of ATY\_ST (state) must exist within the hierarchy.
- If a limit is to be defined the state must exist in the STA\_UDA table.

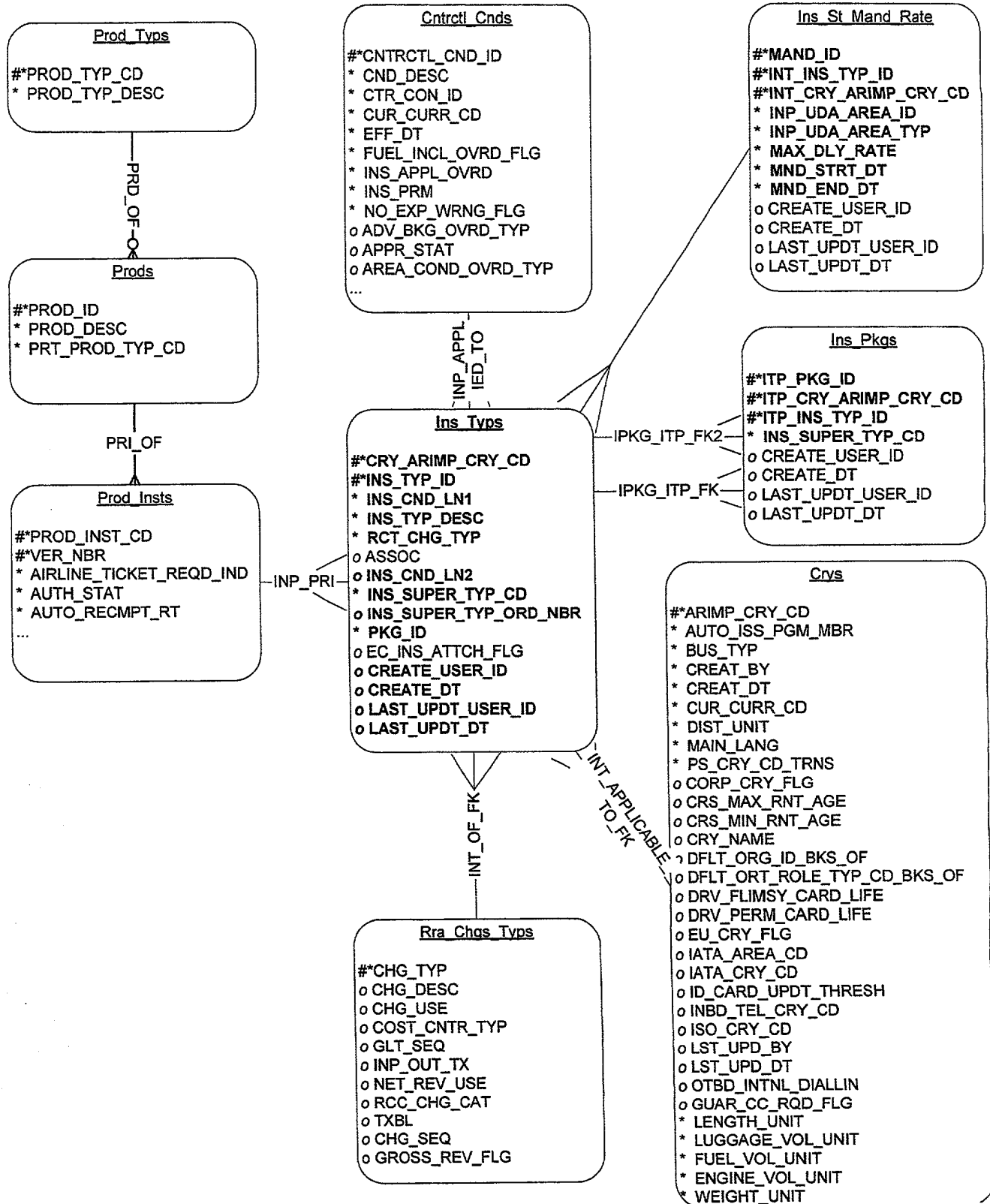
### 2.1.1.2 Related Information

Below is the information related to the record in the RRA\_CHG\_TYPS table that is referenced from the INS\_TYPS table above.

Charge ID	Description	Charge Category	Taxable
00006	CDW/LDW	INS	Y
00007	PAI	INS	Y
00033	Peace of Mind	INS	Y

The details of how the charge types associated with the coverage types will be covered in the Tax and Surcharges Document.

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## 2.1.2 Insurance Provisions Use Case

In VRS, the insurance provisions table will be used to associate the coverage types with products and/or contracts at the specific location or at the hierarchy level of the location for the pricing purpose. This use case explains the design details of insurance provision information to satisfy the coverage requirements of Enterprise's retail business as defined in iteration 2 of the project scope document.

<b>Goal In Context:</b>	ERAC user maintains the Insurance Provisions in the ECARS Insurance Provisions table.
<b>Scope:</b>	This use case deals with Insert/Update activity on the Insurance Provision table as a main actor.
<b>Level:</b>	Sub Functionality
<b>Pre-Condition:</b>	INS_TYPS table pre-populated with all relevant coverage type information. PROD_TYPES table pre-populated with all relevant product type information. USR_DFND_AREAS pre-populated with all relevant area types used for defining rate hierarchy. ERAC entity storing vehicle class reference data has been pre-populated with all relevant vehicle category information.
<b>Success End Condition:</b>	Insurance provision record created.
<b>Failed End Condition:</b>	Insurance provision record not created.
<b>Primary Actor:</b>	User responsible for maintaining coverage data.
<b>Trigger Event:</b>	User who wants to change the coverage composition in terms of charges and/or applicability for a location or its hierarchy.

### 2.1.2.1 Main Success Scenario - Create Insurance Provision Record

Insurance Provision record is created.

The insurance provision table is used to associate coverage types (i.e. PAI, CDW, etc) to a particular class of product type, location, or any other hierarchy class level where the rate is being defined.

## Examples of data in the Insurance Provisions (INS\_PRVS) table.

Prm ID	UDA	UDA-Type	Product Type	Country	Applicability	Vehicle Class	Vehicle Class Suffix	Insurance Type	Start Date	Excess Deposit	Per Day Amount	Per Week Amount	Per Month Amount	Staggered Daily Amount	Threshold Days	Unbundled Daily Rental Amount	Full Coverage Flag	Coverage Limit Amount
51	01	ATY	GRP	R'tail	US			CDW1	01/01/2000	0.000	9.99	59.99	250.00	0.00	0	0.00	Y	0.00
52	01	ATY	GRP	R'tail	US			PAI	01/01/2000	0.000	2.00	18.99	40.99	1.00	3	0.00	Y	0.00
53	01	ATY	GRP	R'tail	US			PEC	01/01/2000	0.000	1.50	21.99	47.99	1.00	3	0.00	N	50000.00
54	0109	ATY	BR	R'tail	US			SLP	01/01/2000	0.000	4.99	24.99	84.99	0.00	0	0.00	Y	0.00
55	0109	ATY	BR	R'tail	US			CDW	01/01/2000	0.000	2.99	18.99	40.99	0.00	0	0.00	Y	0.00
56	0109	ATY	BR	R'tail	US			SLP	01/01/2000	0.000	3.99	21.99	47.99	0.00	0	0.00	Y	0.00

- Premium ID – This is the ID number that is assigned by the system
- User Defined Area and Type – Station or the area covering station-rate hierarchy where this insurance provision record is valid
- Product Type – Classification of product for which the coverage is defined
- Country – Part of foreign key from INS\_TYPS table
- Coverage Applicability:
  - 'I' – Included. – This item must be added and the price is included in the rate, a separate charge for this coverage will not be created.
  - 'M' – Mandatory – This coverage must be included with this product type or contract. This will be charged separate from the product rate.
  - 'O' or NULL – Optional. This coverage may be included with this product type if no conflicting coverage is selected
  - 'D' – Do Not Offer – This coverage should not be offered with this product type or contract
- Vehicle Class – Car class for which this charge is applicable
- Vehicle Class Suffix – Additional identifier applied to certain classes of cars
- Coverage Type ID – For ex: CDW1, PEC
- Coverage Premium Start Date – Effective rental start date for validity
- Excess Deposit – Deductible amount for this coverage
- Per Day Premium – Per day charge amount
- Per week Premium – Per week charge amount.
- Per month Premium – Per month charge amount.
- Staggered Daily Amount – Amount charged after reaching Threshold Days.
- Threshold Days – Number of days to charge at Per Day amount before using Staggered Daily Amount.
- Unbundled Daily Rental Amount – Holds the daily charge for coverage types defined as 'I' included.

- Full Coverage Flag – Flag that dictates whether this has full coverage or not. This field is not null able and the default will be ‘Y’.
- Coverage Limit Amount – The amount of coverage provided if not full coverage. This field is not null able. If the full coverage flag (FULL\_COV\_FLG) is set to ‘Y’ this must be 0.00.

**Note:**

At a User Defined Area ID (UDA) location a coverage limit may only be applied to a single Product Type, Country, Vehicle Car Class, Vehicle Suffix, Coverage Type, Start Date combination. To create a new coverage limit for that coverage type at that location will require creation of multiple records with different coverage types that have a common coverage super-type (See Insurance Type Use Case). An example of this would be:

Branch 0109

Car Class ECAR

Coverage Type – Collision Damage Waiver (CDW)

Coverage Limit amounts desired - \$50,000 and \$60,000.

Prm ID	UDA	UDA-Type	Product Type	Country	Applicability	Vehicle Class	Vehicle Class Suffix	Insurance Type	Start Date	Excess Deposit	Per Day Amount	Per Week Amount	Per Month Amount	Staggered Daily Amount	Threshold Days	Unbundled Daily Rental Amount	Full Coverage Flag	Coverage Limit Amount
61	0109	ATY_BR	'R'etail	US	'O'ptional	ECAR		CDW1	01/01/2000	0.000	9.99	59.99	250.00	0.00	0	0.00	N	50000.00
62	0109	ATY_BR	'R'etail	US	'O'ptional	ECAR		CDW2	01/01/2000	0.000	8.99	49.99	210.00	0.00	0	0.00	N	60000.00

**2.1.2.1.1 Staggered Rates**

Staggered rates are used within the state of NY for the coverage types of PAI and PEC. The rule is for a charge of 2.00 and 1.50, respectively, for the first three days and then a charge of 1.00 a day each, from that point forward.

The rules for these new fields will be as follows:

- If the Threshold Number of Days field is populated, then the Staggered Daily Amount field must be populated. This assumes a staggered rate is in effect.
- If the Threshold Number of Days field is populated, then the Per Week amount and Per Month amount should be 0.00



- If the Per Week or Per Month amounts are populated, then the Staggered Daily Amount and Threshold Number of Days fields should not be populated.

## 2.1.2.2 Related Information

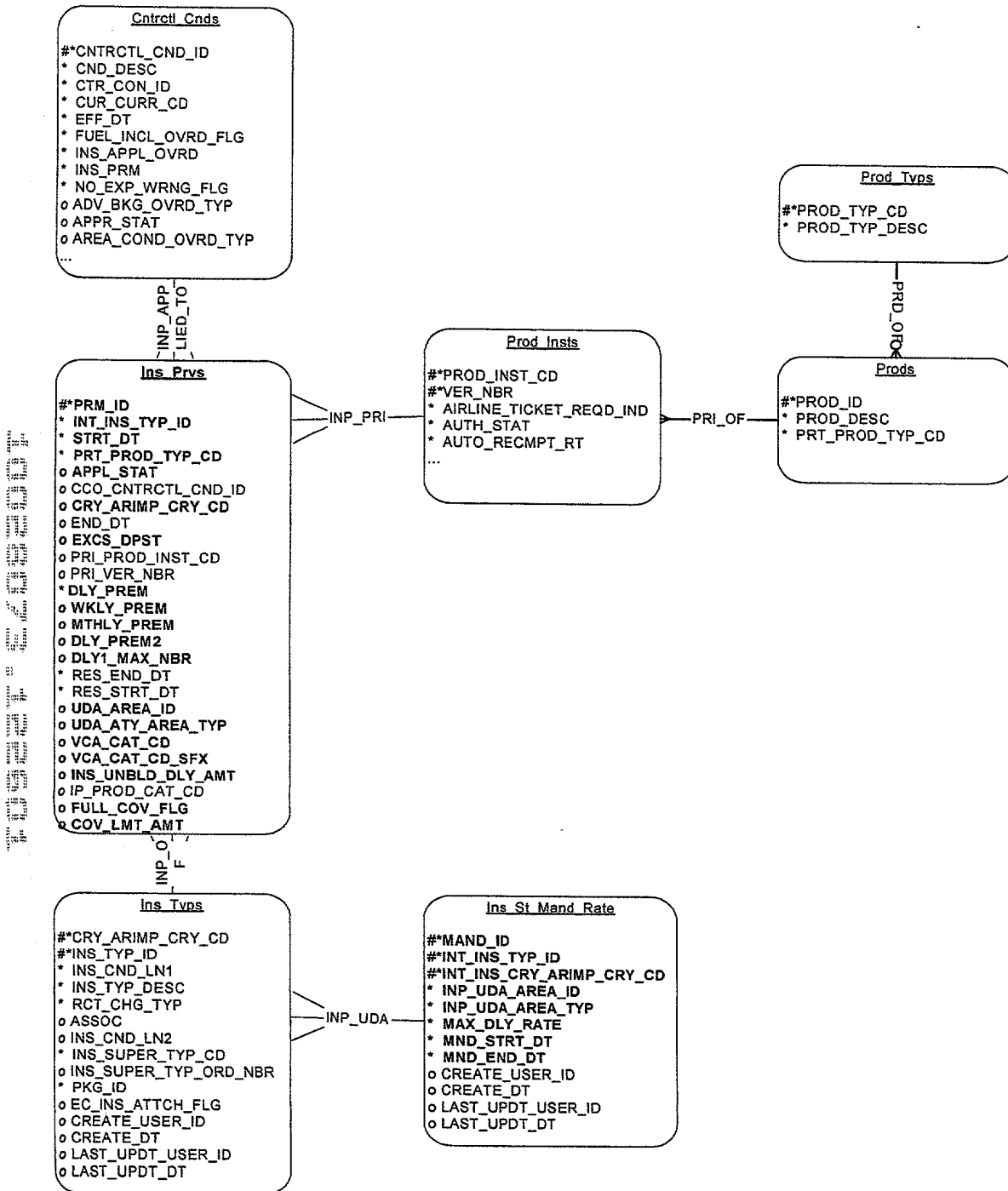
### 2.1.2.2.1 Products and Area Hierarchy Classification

For ERAC implementation the products are classified as 'R'etail, 'S'pecial, 'I'nsurance etc. For more details refer to the use case related to product data set-up.

ERAC rate hierarchy for branches currently supports 11 levels. For a specific station, the rate at the lowest level of hierarchy is always selected. To select a set of coverage charges applicable for the specific rental a combination of product type and the rate hierarchy is used.

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## Coverage Tables - ERD



### 3 VRS Engines/ Services Design Specifications

#### 3.1 Coverage Engine Processes

The coverage engine is a tuxedo service, which is called when information related to coverage types is required. The coverage engine is called internally by the rate search service if the specific vehicle category code is provided at the time of the call. The API for calling the coverage engine is exposed to the external systems so that it can also be called directly if user selects the vehicle category after the rate search call and then wishes to obtain the list of valid coverage types for the rental.

##### 3.1.1 Inputs

The following parameters are displayed in the order that they are needed. All parameters must be passed. The mandatory/optional flags represent which information must be filled in for the coverage engine to return the correct coverage types and rates for the Retail SI business type.

Coverage Engine Input Parameters – Version : 01.00				Technical		Source of Data
Input Parameter	Notes	FML Field Name		Type	Size	
Standard Header	The content of this header will be used for debugging, user test support, performance monitoring, tuning and error logging	refer to standard header document for layout and population rules	Mandatory			All Clients
View version string	Identification string for this TUX interface	FN_INSENGTV0001_VERSION	Mandatory	char	100	TUX View
res_tmstp	Reservation Timestamp format YYYYMMDDHH24MI	FN_MEN_RES_TMPS	Mandatory	char	13	Client App
co_stn_id	Station (Branch) ID of pickup location	FN_MEN_CO_STN_ID	Mandatory	char	11	Client App
co_cty	Country Code of pickup location	FN_MEN_CO_CTY	Mandatory	char	4	Client App
co_tmstp	Start Charges Timestamp format YYYYMMDDHH24MI	FN_MEN_CO_TMSP	Mandatory	char	13	Client App
ci_tmstp	End Charges Timestamp format YYYYMMDDHH24MI	FN_MEN_CI_TMSP	Mandatory	char	13	Client App
bill_cycle	Billing Cycle (Hourly - 'H', or Calendar Day - 'C')	FN_MEN_BILL_CYCLE	Mandatory	char	1	Client App
Prod_type	Product Type ('R'etail, ...)	FN_MEN_PROD_TYP	Mandatory	char	2	Rate Engine
cat_cd	Vehicle Code	FN_MEN_CAT_CD	Mandatory	char	9	Client App
cat_cd_suffix	Suffix vehicle category	FN_MEN_CAT_CD_SFX	Optional	char	5	Client App
Prod_usg_status	Product Usage Status	FN_MEN_PROD_USG_STATUS	Optional	char	1	Client App
Prod_inst_cd	Code to relate it to a particular product instance	FN_MEN_PROD_INST_CD	Optional	char	5	Rate Engine
Prod_inst_ver	Version number of the product instance	FN_MEN_PROD_INST_VER	Optional	long	4	Rate Engine
cont_id	Contract ID	FN_MEN_CONTRACT_ID	Optional	long	4	Client App
contract_id	Contractual Condition ID	FN_MEN_CONTRACTL_CND_ID	Optional	long	4	Client App
insur_ovrd_tpy	Type of Override	FN_MEN_INSUR_OVRD_TYP	Optional	char	1	Client App
contract_id_null	Contractual Condition Null	FN_MEN_CONTRACTL_CND_NULL	Optional	long	4	Client App
insur_ovrd_null	Insurance Override Null	FN_MEN_INSUR_OVRD_NULL	Optional	char	1	Client App
ci_grace_mins	Number of grace minutes allowed for return	FN_MEN_GRACE_MINS	Optional	long	4	Client App

Coverage Engine Input Parameters – Version : 01.00 – Cont.				Technical		Source of Data
Input Parameter	Notes	FML Field Name	Rules	Type	Size	
curr_tab	Exchange Rate Type	FN_MEN_CURR_TAB	Optional	char	1	Client App
cc_curr	Pickup Currency	FN_MEN_CC_CURR	Optional	char	3	Client App
Area_ids	List of UDA's	FN_MEN_AREA_IDS	Optional	char	1000	Rate Engine
best_rate_ind	Best rate indicator	FN_MEN_BEST_RATE_USED	Optional	char	2	Rate Engine
loy_prof_id	Loyalty Profile ID	FN_MEN+LOY_PROF_ID	Optional	char	4	Rate Engine

### 3.1.2 Outputs

Coverage engine returns the list of coverage types and associated attributes for the specified rental. The output structure for this service and the associated details for the structure elements are described below.

The engine error field captures the error number associated with the service call. If engine error field is anything other than '0' zero then the results of the output buffer are undefined.

The record count indicates the number of premium records returned from this call. The remaining fields in the output list after this field have multiple occurrences as indicated by the record count (rec\_count). The coverage engine can return up to 50 records per call.

The premium amount is expressed in terms of daily amount, weekly amount and monthly amount. Corresponding charge frequencies for each of the amount follows these. The charge frequency is optimized based on the values defined for various charge amounts.

The totals field is the total cost of selecting that coverage for this rental.

Applicable status could be 'M'andatory, 'I'ncluded, 'O'ptional or 'D'o\_not\_offer. The client will need to do some processing based on the value for this flag. If the applicability status is 'I'ncluded then the total cost for selecting the coverage is '0.00' zero. If the applicability status is 'O'ptional for set of coverage types having same insurance super type then only one of those coverage types can be selected for this rental.

Coverage Engine Output – Version : 01.30				Technical		Source of Data
Output Parameter	Notes	FML Field Name	Rules	Type	Size	
Error_no	Server error Code or 0	FN_IEN_ERR_STATUS	Mandatory	long	4	CE
err_text	Server Error Text	FN_IEN_ERR_MESSAGE	Optional	char	81	CE
rec_count	Number of records returned	FN_IEN_REC_COUNT	Mandatory	Long	4	CE
prm_id[50]	Premium ID's	FN_IEN_PRM_ID	Mandatory	Long	4	CE

Coverage Engine Output - Version 01.30 - Cont				Technical		Source Of Data
Output Parameter	Notes	FML Field Name	Rules	Type	Size	
dly_prm_amt	Premium Amounts	FN_IEN_DLY_PRM_AMT	Mandatory	Double	8	CE
nbr_dly	Number of days to charge	FN_IEN_NBR_DLY	Mandatory	Long	4	CE
wk_prm_amt	Weekly Premium Amounts	FN_IEN_WKLY_PRM_AMT	Mandatory	Double	8	CE
nbr_wkly	Number of weeks to charge	FN_IEN_NBR_WKLY	Mandatory	Long	4	CE
mt_prm_amt	Monthly Premium Amounts	FN_IEN_MTLY_PRM_AMT	Mandatory	Double	8	CE
nbr_mtlly	Number of months to charge	FN_IEN_NBR_MTLY	Mandatory	Long	4	CE
Stg_prm_amt	Staggered Premium Amount for staggered rate situations	FN_IEN_DLY_PRM_AMT2	Optional	Double	8	CE
Nbr_stg	Number of days	FN_IEN_NBR_DLY2	Optional	Long	4	CE
Threshold_days	Maximum number of days that can be charged at daily rate	FN_IEN_MAX_DAYS	Optional	Long	4	ce
Mnd_dly_amt	State Mandated Daily rate for this coverage type	FN_IEN_MND_DLY_AMT	Optional	Double	8	CE
excs_dpst	Excess Deposits	FN_IEN_EXCS_DPST	Mandatory	Double	8	CE
src_curr	Source Currencies	FN_IEN_SRC_CURR	Mandatory	Char	4	CE
appl_status	Applicable Statuses	FN_IEN_APPL_STATUS	Mandatory	Char	1	CE
rct_chg_typ	Rct Charge Types	FN_IEN_RCT_CHG_TYP	Mandatory	Char	6	CE
typ_id	Type ID's	FN_IEN_TYP_ID	Mandatory	Char	9	CE
typ_desc	Type Descriptions	FN_IEN_TYP_DESC	Mandatory	Char	36	CE
cnd_ln1	Condition Lines 1	FN_IEN_CND_LN1	Mandatory	Char	76	CE
cnd_ln2	Condition Lines 2	FN_IEN_CND_LN2	Optional	Char	76	CE
unbld_dy_rnt_amt	Unbundled Daily Rental Amount	FN_IEN_UNBLD_DY_RNT_AMT	Mandatory	Double	8	CE
ins_super_type	Insurance Super Types	FN_IEN_INS_SUPER_TYPE	Mandatory	Char	4	CE
pkg_uniq_id	Package Unique ID's	FN_IEN_PKG_UNIQ_ID	Optional	Long	4	CE
full_cov_flg	Full coverage flag	FN_IEN_FULL_COV_FLG	Mandatory	Char	1	CE
cov_lmt_amt	Coverage Limit Amount	FN_IEN_COV_LMT_AMT	Optional	Double	8	CE

### 3.1.3 Detailed Process Flow

The Insurance Provision table combined with the Insurance Types table contains the information needed to return the proper coverage types and rates for the calling location.

Each pickup location may not have the coverage type information set-up at the branch level. This requires that the coverage engine traverse through the 11 levels of rate hierarchy list for the specified pickup location starting with the lowest level. The traversal of the rate hierarchy is stopped, when one or more valid coverage types are found at a particular level.

Refer to the use case document on the UDA-Rate Hierarchy for additional details for the rate hierarchy.

The first step is to locate the branch record within the STA\_UDA table using the branch ID. Once located the additional information required for the hierarchy search would now be available. The STA\_UDA table may contain a record for each level of the hierarchy that the branch is associated with.

The results of the above search will be combined with the following field group to find the list of applicable coverage types and charges for the specific rental:

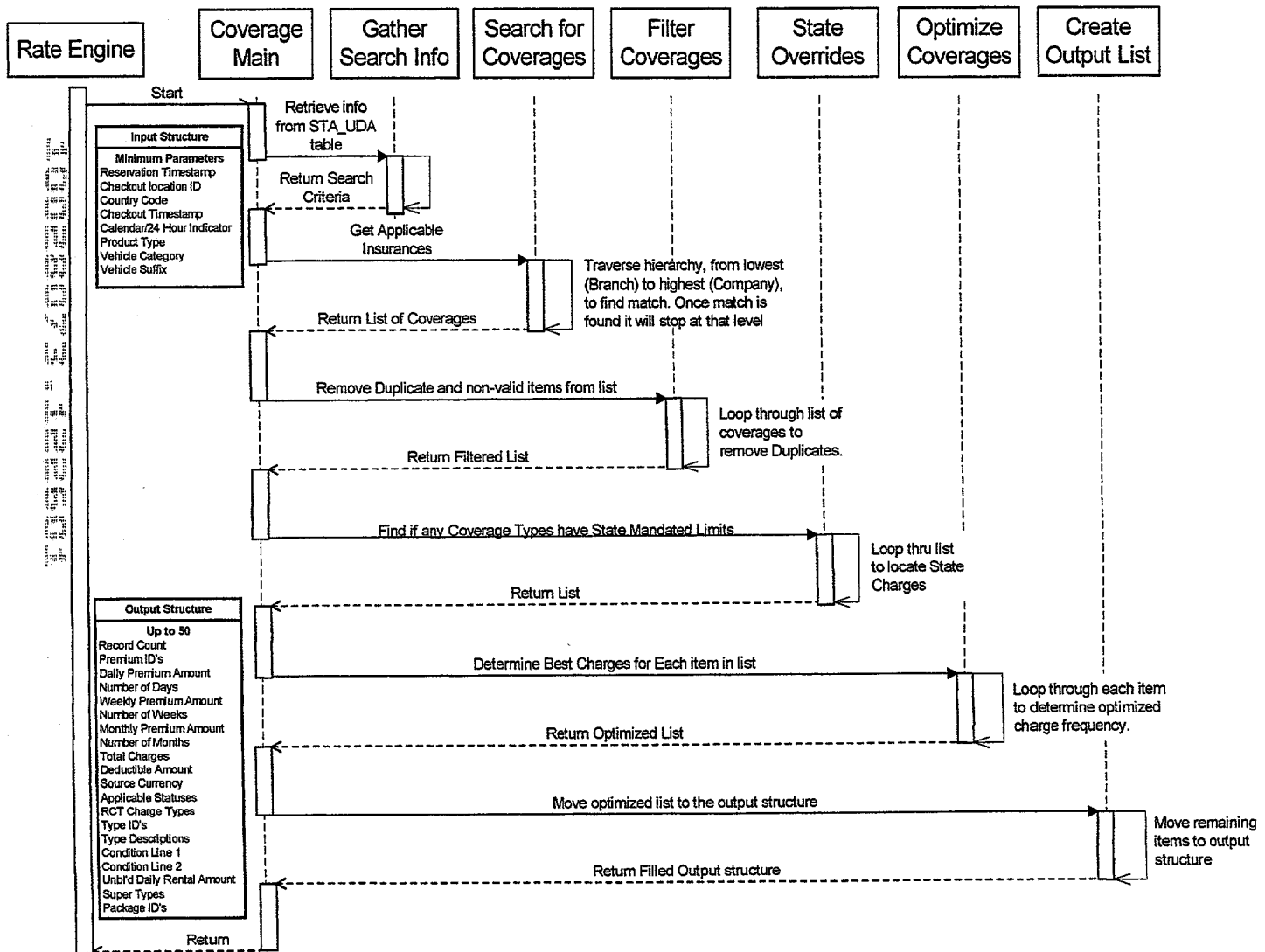
Product Type ('R'etail) = prod\_type.

Vehicle Category Code = cat\_cd or 'ACAR'.

Vehicle Suffix Code = cat\_cd\_suffix (North America Only).

Pickup Date = co\_tmstp (is between the start date and end date)

Country Code = co\_cty.



At the lowest level, the search for valid coverage types would proceed as follows(North America Only):

- Vehicle Category Code + Suffix
- For this Product Type
- In this Country
- Within the specified date range

If not found then the search would be (This would be the European starting point):

- Vehicle Category Code
- For this Product Type
- In this Country
- Within the specified date range

If still not found then the search would become:

- 'ACAR'
- For this Product Type
- In this Country
- Within the Specified Date Range

If still not found then the next level of the UDA hierarchy will be searched starting again with the first search and proceeding with this process until a match is found.

If no match is found, after the hierarchy traversal, the output list will be returned with a record count of 0.

The engine will then remove all duplicates and non-available coverage types through a filtering process. This process will use the car class hierarchy to eliminate any duplicates. The next step is to look for coverage types marked as 'included' or 'mandatory'. If found it will eliminate any others from the list with the same super type. This will be done in the following manner. Looping through the valid records in this sort order:

- Vehicle Car Class with Suffix
- Vehicle Car Class
- ACAR

Each subsequent record that is still marked as valid whose coverage type is the same as the current record will be marked as invalid. The final step will be to check any packages that have been created to ensure that no conflicts exist there.



After filtering, a check will be made to determine if any state mandated limits exist for specific coverage types. By determining the state code from the STA\_UDA table each valid coverage super type will be checked to see if any limits need to be applied. If a super type has not been defined then the coverage type itself will be used to check for a match. If found the amount will be updated in the output list as a separate field that can be referenced by the user forms. If the daily rate is greater than the state mandated rate the daily rate will be changed to reflect the state mandated rate.

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Coverage Engine Detail Design\_I3

## 3.1.3.1 Scenarios

Different scenarios are used to illustrate the variation in the output list of coverage types based on the inputs as indicated below. For The purpose of this illustration we will assume that the INS\_PRVS table in VRS is populated as indicated below.

Records in the Insurance Provisions table:

Prm ID	UDA	UDA-Type	Product Type	Country	Applicability	Vehicle Class + Sfx	Insurance Type	Start Date	Excess Deposit	Per Day Amount	Per Week Amount	Per Month Amount	Staggered Daily Amount	Threshold Days	Unbundled Daily Rental Amount	Full Coverage Flag	Coverage Limit Amount
1	01	ATY-GRP	'R'etail	US	'O'ptional	ACAR	CDW1	01/01/2000	0.000	5.99	25.99	55.99	0.00	0	0.00	Y	0.000
2	01	ATY-GRP	'R'etail	US	'O'ptional	ACAR	PAI	01/01/2000	0.000	2.99	18.99	40.99	0.00	0	0.00	Y	0.000
3	01	ATY-GRP	'R'etail	US	'O'ptional	ACAR	SLP1	01/01/2000	0.000	3.99	21.99	87.99	0.00	0	0.00	Y	0.000
4	01	ATY-GRP	'R'etail	US	..	ACAR	PEC	01/01/2001	300.000	4.99	15.99	75.99	0.00	0	0.00	Y	0.000
11	013	ATY-RGN	'R'etail	US	'M'andatory	ACAR	PAI	01/31/2001	500.000	4.99	26.99	110.99	0.00	0	0.00	Y	0.000
12	013	ATY-RGN	'R'etail	US	'O'ptional	ACAR	CDW1	01/01/2000	0.000	5.99	25.99	55.99	0.00	0	0.00	Y	0.000
13	013	ATY-RGN	'R'etail	US	'O'ptional	ACAR	SLP1	01/01/2000	250.00	3.99	21.99	47.99	0.00	0	0.00	Y	0.000
22	0109	ATY_BR	'R'etail	US	'O'ptional	ECAR	PAI	01/01/2000	0.000	3.99	29.99	60.99	0.00	0	0.00	Y	0.000
23	0109	ATY_BR	'R'etail	US	'I'ncluded	LCAR	SLP1	01/01/2000	250.00	3.99	21.99	47.99	0.00	0	3.99	Y	0.000
24	0109	ATY_BR	'R'etail	US	'O'ptional	LCAR	PAI	01/01/2000	100.00	4.50	32.50	130.00	0.00	0	0.00	Y	0.000
25	0109	ATY_BR	'R'etail	US	'O'ptional	LCAR	SLP2	01/01/2000	100.00	4.50	32.50	130.00	0.00	0	0.00	Y	0.000
31	0109	ATY_BR	'R'etail	US	Optional	ACAR	SLP1	01/01/2000	250.00	3.00	21.99	47.99	0.00	0	0.00	Y	0.000
32	0109	ATY_BR	'R'etail	US	'O'ptional	ACAR	PAI	01/01/2000	100.00	4.50	32.50	130.00	0.00	0	0.00	Y	0.000
33	0109	ATY_BR	'R'etail	US	'O'ptional	ACAR	SLP2	01/01/2000	100.00	4.50	32.50	130.00	0.00	0	0.00	Y	0.000
34	0109	ATY_BR	'R'etail	US	'O'ptional	ACAR	CDW1	01/01/2000	0.000	5.99	25.99	55.99	0.00	0	0.00	Y	0.000
41	0701	ATY_BR	'R'etail	US	'O'ptional	ACAR	PAI	01/01/2000	0.00	2.00	0.00	0.00	1.00	3	0.00	Y	0.000
42	0701	ATY_BR	'R'etail	US	'O'ptional	ACAR	PEC	01/01/2000	0.00	1.50	0.00	0.00	1.00	3	0.00	Y	0.000
43	0701	ATY_BR	'R'etail	US	'D'o not offer	ACAR	SLP	01/01/2000	150.00	5.99	35.99	100.99	0.00	0	0.00	Y	0.000
44	0701	ATY_BR	'R'etail	US	'D'o not offer	ACAR	CDW	01/01/2000	0.00	3.99	28.99	98.99	0.00	0	0.00	Y	0.000

The layout for the Rate Hierarchy for the branch 0109 is as shown below and is provided in STA\_UDA table.

Station UDA table records for Branch 0109, 0108, AND 0701.

Station ID	Area ID	Area Type	Start Date	End Date
0109	ENTERPRISE	ATY_CMPNY	01/01/1999	12/31/2037
0109	US	ATY_CTRY	01/01/1999	12/31/2037
0109	01	ATY_GRP	01/01/1999	12/31/2037
0109	013	ATY_RGN	01/01/1999	12/31/2037
0109	FL	ATY_ST	01/01/1999	12/31/2037
0109	9931	ATY_AREA	01/01/1999	12/31/2037

Station ID	Area ID	Area Type	Start Date	End Date
0109	US327	ATY HZIP	01/01/1999	12/31/2037
0109	US32779	ATY ZIP	01/01/1999	12/31/2037
0109	US407	ATY PHN_AR	01/01/1999	12/31/2037
0109	US407869	ATY XCHNGE	01/01/1999	12/31/2037
0109	0109	ATY BR	01/01/1999	12/31/2037
0108	GA	ATY ST	01/01/1999	12/31/2037
0108	0108	ATY BR	01/01/1999	12/31/2037
0701	NY	ATY ST	01/01/1999	12/31/2037
0701	0701	ATY BR	01/01/1999	12/31/2037

## 3.1.3.1.1 Individual Scenarios 1

Scenario1: Rental is being made for the location 0109 with a vehicle car class of LCAR

## Input Parameters:

Branch 0109  
Country Code US  
Pickup Date 200107011000  
Return Date 200107081000  
Billing Cycle H  
Product Type R  
Vehicle Cat LCAR  
Cat. Cd. Suffix Null

The output list of coverage types show that the coverage charge defined for specific vehicle category at the lowest level i.e. BRANCH is returned.

## The initial list of returned records:

Prm ID	UDA	UDA Type	Product Type	Country	Applicability	Vehicle Class + Sfx	Insurance Type	Start Date	Excess Deposit	Per Day Premium	Per Week Premium	Per Month Premium	Staggered Daily Amount	Threshold Days	Unbundled Daily Amt	Full Coverage Flag	Coverage Limit Amount
24	0109	ATY BR	'R'etail	US	'O'ptional	LCAR	PAI	01/01/2000	100.00	4.50	32.50	130.00	0.00	0	0.00	Y	0.00
23	0109	ATY BR	'R'etail	US	'I'ncluded	LCAR	SLP1	01/01/2000	250.00	0.00	0.00	0.00	0.00	0	3.99	Y	0.00
25	0109	ATY BR	'R'etail	US	'O'ptional	LCAR	SLP2	01/01/2000	100.00	4.50	32.50	130.00	0.00	0	0.00	Y	0.00
31	0109	ATY BR	'R'etail	US	Optional	ACAR	SLP1	01/01/2000	250.00	3.00	21.99	47.99	0.00	0	0.00	Y	0.00
32	0109	ATY BR	'R'etail	US	'O'ptional	ACAR	PAI	01/01/2000	100.00	4.50	32.50	130.00	0.00	0	0.00	Y	0.00
33	0109	ATY BR	'R'etail	US	'O'ptional	ACAR	SLP2	01/01/2000	100.00	4.50	32.50	130.00	0.00	0	0.00	Y	0.00
34	0109	ATY BR	'R'etail	US	'O'ptional	ACAR	CDW1	01/01/2000	0.000	5.99	25.99	55.99	0.00	0	0.00	Y	0.00

The search will return all items that match the Car class with Suffix, the Car Class or ACAR.

This search would result in the above set. This will then be filtered down to the unique items using the following priority.

- If in North America Car Class with Suffix

- Car Class (Stating point for Europe).
- ACAR

During the filtering the following records would be removed:

- 25, 31, 33 - since this branch explicitly includes the SLP1 coverage for 'R'etail Product Type when rented with the 'LCAR' car class, the other optional coverage type of SLP2 with same super type is not included in the output list.
- 32 - Since a coverage Type of PAI is being offered with the car class it would eliminate the need for the ACAR version.

The output list also shows that the optimization is being done for the charge frequency based on the daily, weekly, and monthly rates.

The output records returned would be:

Field	Value(s)		
Engine Error	0		
Record Count	3		
Premium ID's	24	23	34
Daily Premium Amounts	4.50	0	5.99
Number of Daily Premiums	7	0	0
Weekly Premium Amounts	32.50	0	25.99
Number of Weekly Premiums	0	0	1
Monthly Premium Amounts	130.00	0	55.99
Number of Monthly Premiums	0	0	0
Staggered Premium Amount	0.00	0.00	0.00
Number Staggered	0	0	0
Mandated Daily Rate	0.00	0.00	0.00
Excess Deposits	150.00	250.00	0.00
Source Currencies	US	US	US
Applicable Statuses	O	I	O
Charge Types	00007	00010	00006
Type ID's	PAI	SLP1	CDW1
Type Descriptions	Personal ...	Supplemental...	Collision...
Condition Line 1	Personal ...	Supplemental...	Collision...
Condition Line 2	Null	Null	Null
Unbundled Daily Amount	0	3.99	0
Super Types	PAI	SLP	CDW
Package ID's	0	0	0
Full Coverage Flag	Y	Y	Y
Coverage Limit Amount	0.00	0.00	0.00

## 3.1.3.1.2 Individual Scenarios 2

Scenario2: Rental is being made for the location 0109 with a vehicle car class as PCAR

## Input Parameters:

Branch 0109  
Country Code US  
Pickup Date 200107011000  
Return Date 200107041000  
Billing Cycle H  
Product Type R  
Vehicle Cat PCAR  
Cat. Cd. Suffix XX

The output list of coverage types shows that there are no coverage types defined for PCAR with a suffix of XX at the lowest level, but the ACAR vehicle class is present. Since the ACAR class is present, this will be used and the hierarchy traversal will stop at this level.

Since both the coverage types SLP1 and SLP2, having the same super type of SLP, are marked as optional, they are included in the output list returned. As described earlier the GUI will ensure that only one is selected by the customer.

## The initial list of returned records:

Prm ID	UDA	UDA Type	Product Type	Country	Applicability	Vehicle Class + Sfx	Insurance Type	Start Date	Excess Deposit	Per Day Premium	Per Week Premium	Per Month Premium	Staggered Daily Amount	Threshold Days	Unbundled Daily Amt	Full Coverage Flag	Coverage Limit Amount
34	0109	ATY BR	'R'etail	US	'O'ptional	ACAR	CDW1	01/01/2000	0.000	5.99	25.99	55.99	0.00	0.00	0.00	Y	0.00
32	0109	ATY BR	'R'etail	US	'O'ptional	ACAR	PAI	01/01/2000	100.00	4.50	32.50	130.00	0.00	0.00	0.00	Y	0.00
31	0109	ATY BR	'R'etail	US	'O'ptional	ACAR	SLP1	01/01/2000	250.00	3.00	21.99	47.99	0.00	0.00	0.00	Y	0.00
33	0109	ATY BR	'R'etail	US	'O'ptional	ACAR	SLP2	01/01/2000	100.00	4.50	32.50	130.00	0.00	0.00	0.00	Y	0.00

Since no conflicts exist with the applicability status, all records above will be optimized and returned

The output records returned would be:

Field	Value(s)			
Engine Error	0			
Record Count	4			
Premium ID's	34	32	31	33
Daily Premium Amounts	5.99	4.50	3.00	4.50
Number of Daily Premiums	3	3	3	3
Weekly Premium Amounts	25.99	32.50	21.99	32.50
Number of Weekly Premiums	0	0	0	0
Monthly Premium Amounts	55.99	130.00	47.99	130.00
Number of Monthly Premiums	0	0	0	0
Staggered Premium Amount	0.00	0.00	0.00	0.00
Number Staggered	0	0	0	0
Mandated Daily Rate	0.00	0.00	0.00	0.00
Excess Deposits	0.00	100.00	250.00	100.00
Source Currencies	US	US	US	US
Applicable Statuses	O	O	O	O
Charge Types	00006	00007	00010	00010
Type ID's	CDW1	PAI	SLP1	SLP2
Type Descriptions	Collision	Personal	Supplemental...	Supplemental...
Condition Line 1	Collision	Personal	Supplemental...	Supplemental...
Condition Line 2	Null	Null	Null	Null
Unbundled Daily Amount	0	0	0	0
Super Types	CDW	PAI	SLP	SLP
Package ID's	0	0	0	0
Full Coverage Flag	Y	Y	Y	Y
Coverage Limit Amount	0.00	0.00	0.00	0.00



## 3.1.3.1.3 Individual Scenarios 3

Scenario 3: Rental is made for the location 0108; which is within a group 01 and happens to be in region 013.

The output list of coverage types shows that since no other coverage types are defined at the lowest level of BRANCH and any other rate hierarchy level between branch and region, the coverage types defined at the REGION level are selected. In addition, no specific coverage records exist for the specific vehicle category so coverage's defined for ACAR are selected.

If search is from

Branch 0108  
Country Code US  
Pickup Date 200107011000  
Return Date 200107091000  
Billing Cycle H  
Product Type R  
Vehicle Cat SCAR  
Cat. Cd. Suffix Null

The initial list of returned records:

Prim ID	UDA	UDA Type	Product Type	Country	Applicability	Vehicle Class + Sfx	Insurance Type	Start Date	Excess Deposit	Per Day Premium	Per Week Premium	Per Month Premium	Staggered Daily Amount	Threshold Days	Unbundled Daily Amt	Full Coverage Flag	Coverage Limit Amount
12	013	ATY-RGN	R'tail	US	O'ptional	ACAR	CDW1	01/01/2000	0.000	5.99	25.99	55.99	0.00	0	0.00	Y	0.00
11	013	ATY-RGN	R'tail	US	M'andatory	ACAR	PAI	01/31/2001	500.000	4.99	26.99	110.99	0.00	0	0.00	Y	0.00
13	013	ATY-RGN	R'tail	US	O'ptional	ACAR	SLP1	01/01/2000	250.00	3.99	21.99	47.99	0.00	0	0.00	Y	0.00

Branch 0108 resides within the state of Georgia (GA). Georgia has mandated that the maximum that can be charged for PAI on a daily basis would be 3.99

Mandated ID	Country	Insurance Super Type	UDA Type	UDA	Daily Rate	Start Date	End Date
1	US	PAI	ATY ST	GA	3.99	01/01/2001	12/31/2037



Since no conflicts exist with Applicability and Super types then all records will be optimized and returned.

The output records returned would be:

Field	Value(s)		
Engine Error	0		
Record Count	3		
Premium ID's	12	11	13
Daily Premium Amounts	5.99	3.99	3.99
Number of Daily Premiums	1	1	1
Weekly Premium Amounts	25.99	26.99	21.99
Number of Weekly Premiums	1	1	1
Monthly Premium Amounts	55.99	110.99	47.99
Number of Monthly Premiums	0	0	0
Staggered Premium Amount	0.00	0.00	0.00
Number Staggered	0	0	0
Mandated Daily Rate	0.00	3.99	0.00
Excess Deposits	0	500.00	250.00
Source Currencies	US	US	US
Applicable Statuses	O	M	O
Charge Types	00006	00007	00010
Type ID's	CDW1	PAI	SLP1
Type Descriptions	Collision	Personal	Supplemental ...
	...	...	
Condition Line 1	Collision	Personal	Supplemental ...
	...	...	
Condition Line 2	Null	Null	Null
Unbundled Daily Amount	0	0	0
Super Types	CDW	PAI	SLP
Package ID's	0	0	0
Full Coverage Flag	Y	Y	Y
Coverage Limit Amount	0.00	0.00	0.00

## 3.1.3.1.4 Individual Scenario 4

Scenario 4: Rental is made for the location 0701; which is within a group 07 and is in State NY.

If search is from

Branch 0701

Country Code US

Pickup Date 200107011000

Return Date 200107051000

Billing Cycle H

Product Type R

Vehicle Cat ECAR

Vehicle Suffix \*\*

The initial list of returned records:

Prm ID	UDA	UDA-Type	Product Type	Country	Applicability	Vehicle Class + Sfx	Insurance Type	Start Date	Excess Deposit	Per Day Amount	Per Week Amount	Per Month Amount	Staggered Daily Amount	Threshold Days	Unbundled Daily Amount	Full Coverage Flag	Coverage Limit Amount
41	0701	ATY BR	'R'etail	US	'O'ptional	ACAR	PAI	01/01/2000	0.00	2.00	0.00	0.00	1.00	3	0.00	Y	0.00
42	0701	ATY BR	'R'etail	US	'O'ptional	ACAR	PEC	01/01/2000	0.00	1.50	0.00	0.00	1.00	3	0.00	Y	0.00
43	0701	ATY BR	'R'etail	US	'D'o not offer	ACAR	SLP	01/01/2000	150.00	5.99	35.99	100.99	0.00	0	0.00	Y	0.00
44	0701	ATY BR	'R'etail	US	'D'o not offer	ACAR	CDW	01/01/2000	0.00	3.99	28.99	98.99	0.00	0	0.00	Y	0.00

Since no conflicts exist with Applicability and Super types then all records will be optimized and returned.

[illegible]

The output records returned would be:

Field	Value(s)			
Engine Error	0			
Record Count	4			
Premium ID's	41	42	43	44
Daily Premium Amounts	2.00	1.50	5.99	3.99
Number of Daily Premiums	3	3	4	4
Weekly Premium Amounts	0.00	0.0	35.99	28.99
Number of Weekly Premiums	0	0	0	0
Monthly Premium Amounts	0.00	0.00	100.99	98.99
Number of Monthly Premiums	0	0	0	0
Staggered Premium Amount	1.00	1.00	0.00	0.00
Number Staggered	1	1	0	0
Threshold Days	3	3	0	0
Mandated Daily Rate	0.00	0.00	0.00	0.00
Excess Deposits	0.00	0.00	150.00	0.00
Source Currencies	US	US	US	US
Applicable Statuses	O	O	D	D
Charge Types	00007	00010	00011	00006
Type ID's	PAI	PEC	SLP	CDW
Type Descriptions	Personal	Personal	Supplemental...	Collision
Condition Line 1	Personal	Personal	Supplemental...	Collision
Condition Line 2	Null	Null	Null	Null
Unbundled Daily Amount	0	0	0	0
Super Types	PAI	PEC	SLP	CDW
Package ID's	0	0	0	0
Full Coverage Flag	Y	Y	Y	Y
Coverage Limit Amount	0.00	0.00	0.00	0.00

## 4 Key Risks, Assumptions and Issues

### 4.1 Risks

### 4.2 Assumptions

### 4.3 Issues

The following issues, broken out by major category, have been identified as part of Iteration 2.

#### 4.3.1 Staggered Rates

Do you offer Staggered rates for additional products like coverage types . Currently New York charges PAI at \$3.50 for the first day and a decreased rate after the first day.

RE: This is being created as a new gap, that will be included in iteration 2.

#### 4.3.2 CDW

When CDW coverage is included in the rate, is it always the highest liability limit that can be offered by a branch?

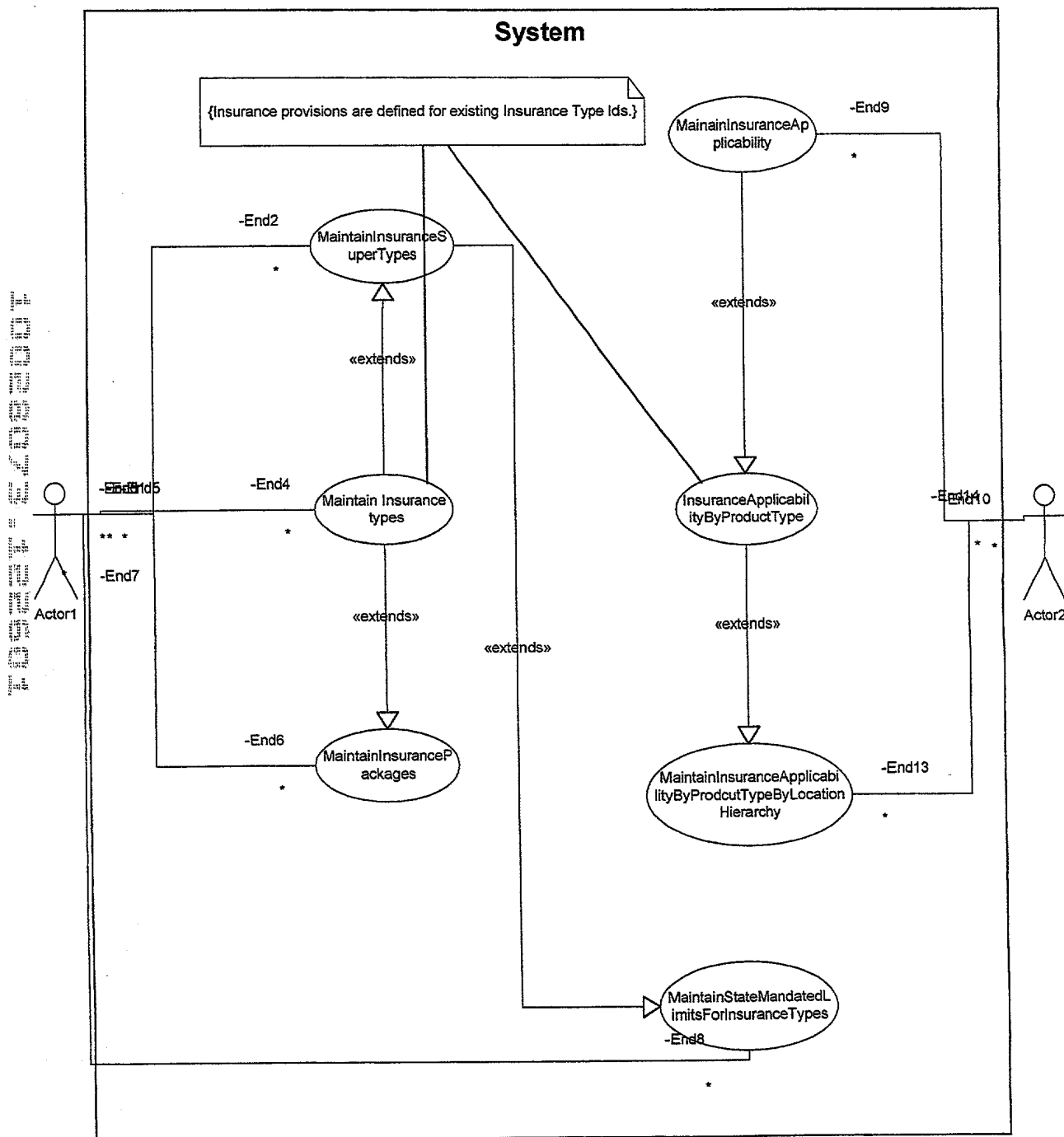
RE: Closed during Detail Design Review.

#### 4.3.3 Zero as a Valid Value

During the detailed design review it was indicated that zero could be a valid value for any of the charge amounts. VRS currently uses zero in charge amount to indicate the presence of null. We need to agree on another convention for VRS engines to communicate presence of null.

RE: Closed during Detail Design Review.

## 5 Appendixes







ECARS V2.0  
Accurate Out the Door Pricing  
Detailed Design Specification  
Data Conversion  
Iteration 3 - Final

**perotsystems™**

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2.0	09/17/01	Chris Cappelier	Addition of NatRes Conversion (Section 2.5.2)
2.1	09/17/01	Chris Cappelier	Addition of SPL RateTypes for SI Conversion. Embedded in Sections 2.1, 2.2, 2.3 and 2.5.1
2.2	09/28/01	Chris Cappelier	Updates as per Customer Review meeting
2.3	10/29/01	Chris Cappelier	Iteration 3 – Final

## 1 Introduction

### 1.1 Overview

The purpose of this document is to provide detailed design specifications of how the ECARS SI Retail default rates are mapped and converted to the VRS data model for iteration 2.

### 1.2 Iteration Dependencies

No Cross Dependencies for this Iteration.

### 1.3 Environment

The Unix platform will be used for all SI data extracts for conversion purposes. Data will be extracted from the Enterprise Oracle instance and converted into the VRS data model. Pro\*C programs and, where appropriate; SQL Loader will be used to read/write and process the data extracts.

For low volume data loads spreadsheets will be used to obtain the appropriate data from ERAC.

## 2 Design Specifications for functional areas:

### 2.1 Functional Area: Product Types

#### 2.1.1 Data Transformation Rules

One product type will be created for each line of business having it's own set of products and rates. For Iteration 2 the retail (R) product type will be the primary focus. Product types will be set up prior to the conversion process. Perot Systems will provide suggested values for the retail product type entry, and ERAC will be responsible for validating the suggested data set up.

For Iteration 3 we have added a Special Retail product type (S) for the conversion of the SI Retail business with a RateType of SPL.

#### 2.1.2 Data Selection Criteria

N/A

#### 2.1.3 Source and Target Table Impacts

<i>Source Tables</i>	<i>Target Tables</i>
BUS_TYP	PROD_TYPS

#### 2.1.4 Detailed Table / Column Mapping

N/A

#### 2.1.5 Data Dependencies

<u>Prod_Types</u>
#*PROD_TYP_CD
* PROD_TYP_DESC
* BILL_CYCL_IND

#### 2.1.6 Manual Conversion

Two Product Types will be created manually by Perot Systems. One for SI retail conversion and one for UM Rates (NatRes). Both entries will use a 24 hour billing cycle. The entries will be created as shown below.

Product Type	Product Type Description	Billing Cycle Indicator
R	Standard Retail Product Type	H
S	Special Retail Product Type	H

#### 2.1.7 Assumptions

N/A

#### 2.1.8 Issues

N/A

#### 2.1.9 Data Volumetrics

2

#### 2.1.10 Data Validation Criteria

N/A



## 2.2 Functional Area: Product Families

### 2.2.1 Data Transformation Rules

Product families will be set up prior to the conversion process. Perot Systems will provide suggested values for the retail product family entry, and ERAC will be responsible for validating the suggested data set up and verifying that it meets their business needs.

### 2.2.2 Data Selection Criteria

N/A

### 2.2.3 Source and Target Table Impacts

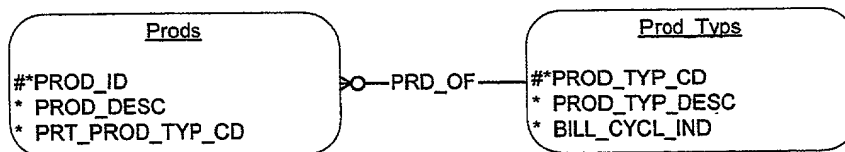
<i>Source Tables</i>	<i>Target Tables</i>
Data provided by ERAC	PRODS

### 2.2.4 Detailed Table / Column Mapping

N/A

### 2.2.5 Data Dependencies

Prior to creating product families (PRODS) the product types table (PROD\_TYPS) must be populated.



### 2.2.6 Manual Conversion

Two ProductFamilies will be created by Perot Systems for the SI retail conversion, i.e. one for Retail and one for Special Retail.

The entries will be created as shown below.

Product Type	Product Family	Product Family Description
R	RTLM	Retail Standard Rates
S	RTS	Special Retail Rates

**2.2.7 Assumptions**

Product family RTLM is for SI retail conversion (Iteration 2).

Product family RTS is for SI retail conversion, but for SPL rates (Iteration 3).

Product family RTLM will also be used for NATRES UM product(Iteration 3)

**2.2.8 Issues**

N/A

**2.2.9 Data Volumetrics**

2

**2.2.10 Data Validation Criteria**

N/A

## 2.3 Functional Area: Product Instance

### 2.3.1 Data Transformation Rules

Product instances will be set up prior to the conversion process. Perot Systems will provide suggested values for the retail product instance entries. Enterprise will be responsible for validating the suggested data set up and verifying that it meets their business needs.

### 2.3.2 Data Selection Criteria

N/A

### 2.3.3 Source and Target Table Impacts

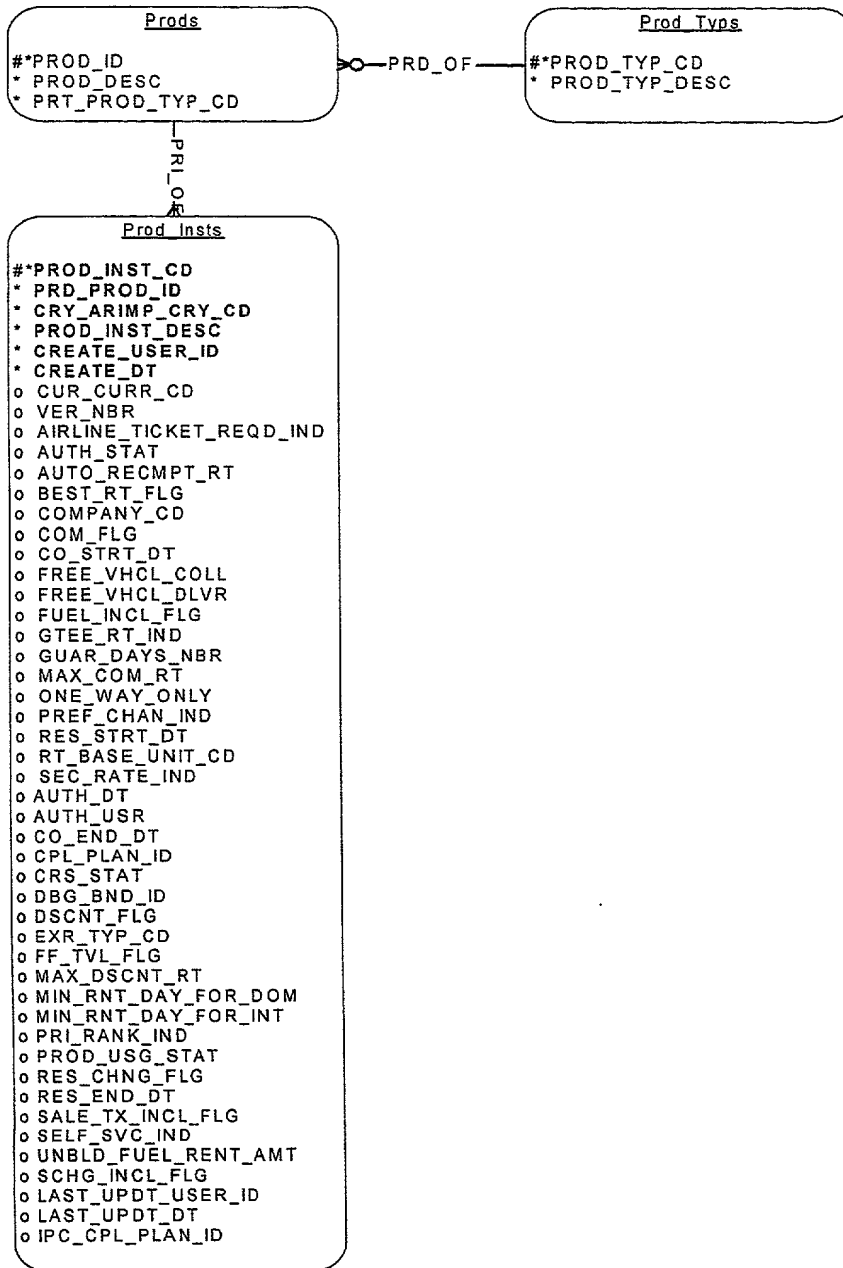
<i>Source Tables</i>	<i>Target Tables</i>
Data provided by ERAC	PROD_INSTS

### 2.3.4 Detailed Table / Column Mapping

N/A

### 2.3.5 Data Dependencies

Prior to creating product instances (**PROD\_INSTS**) the product types table (**PROD\_TYPS**) and the product family table (**PRODS**) must be populated.



### 2.3.6 Manual Conversion

Four Product Instances will be manually created by Perot Systems for the SI retail conversion. These four entries create products to be used for standard SI local market retail rates.

The product instances created will be given generic names. There is no “intelligence” behind the name of the product. In cases where only one SI retail rate is active at a given location for a specific point in time, product RTLSI1 will be used by the conversion process. In the event more than one retail rate plan is active at a given location, products RTLSI2 through RTLSI4 will be used as needed.

In addition to four retail products two additional products for SI Special Retail rates and one product for the UM-rates (NatRes) will be created  
There is no intelligence behind these product codes.

The product instance entries will be created as shown below.

Product Code	Product Instance Description	Product Family Code	Country	Create Date
RTLM1	Standard Local Market Retail 1	RTLM	US	Current Date
RTLM2	Standard Local Market Retail 2	RTLM	US	Current Date
RTLM3	Standard Local Market Retail 3	RTLM	US	Current Date
RTLM4	Standard Local Market Retail 4	RTLM	US	Current Date
RTLM5	Standard Local Market Retail 5	RTLM	US	Current Date
RTLM6	Standard Local Market Retail 6	RTLM	US	Current Date
RTLM7	Standard Local Market Retail 7	RTLM	US	Current Date
RTLM8	Standard Local Market Retail 8	RTLM	US	Current Date
RTLCIN	Standard Local Market Retail Inactive	RTLM	US	Current Date
<b>RTSA</b>	<b>Retail Special Active</b>	<b>RTS</b>	<b>US</b>	<b>Current Date</b>
<b>RTSI</b>	<b>Retail Special Inactive</b>	<b>RTS</b>	<b>US</b>	<b>Current Date</b>
<b>RTLUM</b>	<b>UM Retail Rate</b>	<b>RTLM</b>	<b>US</b>	<b>Current Date</b>

Create Operator	Tax Included Flag	Surcharge Included Flag	Refueling Included Flag
CONVERSION	N	N	N
CONVERSION	N	N	N
CONVERSION	N	N	N
CONVERSION	N	N	N
CONVERSION	N	N	N
CONVERSION	N	N	N
CONVERSION	N	N	N
CONVERSION	N	N	N
CONVERSION	N	N	N
<b>CONVERSION</b>	<b>N</b>	<b>N</b>	<b>N</b>
<b>CONVERSION</b>	<b>N</b>	<b>N</b>	<b>N</b>
<b>CONVERSION</b>	<b>N</b>	<b>N</b>	<b>N</b>

### 2.3.7 Assumptions

#### *SI Conversion (Iteration 2)*

Special retail products will not be created for any specific purpose (i.e. unlimited miles, limited miles high, etc). The standard retail rates as they exist in SI today can be either limited miles, unlimited miles, or unlimited miles for selected vehicle categories and limited miles for others. Regardless of the mileage limits of a particular rate plan, they will be converted under a common product instance. If the rate is inactive the details will be tied to the RTLMI.

SI Conversion Special Rates (Iteration 3)

Two product codes will be used for Special Retail rates.

NatRes Conversion (Iteration 3)

Since there can only be one UM rate header active at any given point in time, for a particular branch, there is no need to have more than one product instance.

There is no concept of Inactive products in UM since no History will be brought over.

**2.3.8 Issues**

N/A

**2.3.9 Data Volumetrics**

8

**2.3.10 Data Validation Criteria**

N/A

## 2.4 Functional Area: Rate Qualifier

### 2.4.1 Data Transformation Rules

One Rate Qualifier will be created manually for the SI Special Rates (RTS)

Below are the Special Rate rules represented in the RateQual Table  
(RNT\_DRTN\_BNDS)

CoStrtDay	CoFrom	CoEndDay	CoUpto	CiDayOfWk
Friday	12:00	Sunday	10:00	Monday

### 2.4.2 Data Selection Criteria

N/A

### 2.4.3 Source and Target Table Impacts

Source Tables	Target Tables
N/A	RNT_DRTN_BNDS

### 2.4.4 Detailed Table / Column Mapping

N/A

### 2.4.5 Data Dependencies

None

### 2.4.6 Manual Conversion

One RateQual will be created for association with Special Product to accommodate iteration 3 testing. These quals will be created manually by ERAC when the system goes live.

### 2.4.7 Assumptions

### 2.4.8 Issues

### 2.4.9 Data Volumetrics

1

### 2.4.10 Data Validation Criteria

N/A

## 2.5 Functional Area: Rates

### 2.5.1 SI Rates

#### 2.5.1.4 Data Transformation Rules

The ECARS conversion retrieval will consist of a number of logical retrieval processes at each Hierarchy level. The table below represents some volumetrics from the ECARS database. For a full list refer to section 2.5.10. These volumetrics are based upon a database refresh received by PSC on September 17 2001, and represent five of the eighteen ECARS machines.

Level	Ecars Table	Total 'R'etail Rows	Active 'R'etail Rows	Deleted 'R'etail -Rows	Inactive 'R'etail Rows
Branch	BR_DFLT	212	65	103	44
Phone Exchange	AREA_XCHNG_DFLT	1	0	1	0
Phone Area	Not Available	-	-	-	-
Zip Code	ZIP_CDE_DFLT	1	1	0	0
High Zip Code	Not Available	-	-	-	-
City	Not Available	-	-	-	-
Area	AREA_DFLT	122	47	57	18
State	ST_DFLT	9	2	7	0
Sub Region	Not Available	-	-	-	-
Region	REGN_DFLT	19	10	6	3
Group	GRP_DFLT	21	12	8	1
Total		385	137	182	66

#### 2.5.1.5 Data Selection Criteria

This section describes the retrieval from the ECARS tables and which fields are retained and used by the VRS population.

##### Ecars Retrieval

*BR\_DFLT/AREA\_XCHNG\_DFLT/ZIP\_CDE\_DFLT/AREA\_DFLT/ST\_DFLT/REGN\_DFLT/GRP\_DFLT*

For all hierarchy levels the entry point for the conversion process will be one of the xxxxx\_DFLT tables. This will allow us to retrieve all the rates and other appropriate information from the ECARS tables based upon their availability.

The selection criteria is as follow:

- The rows marked with a *BusinessType* of 'R'etail will be retrieved.
- The rows with a *RecordStatusCode* equal to <null> or 'I'nactive will be retrieved.



For all hierarchy tables the fields *BusinessType* and *DefaultNumber* will be retained and used to retrieve the corresponding data from the DFLT table.

For the *BR\_DFLT* table the fields *GroupId* and *BranchId* will be retained for VRS population.

For the *AREA\_XCHNG\_DFLT* table the fields *AreaCode* and *AreaExchangeNbr* will be retained for VRS population.

For the *ZIP\_CDE\_DFLT* table the field *ZipCode* will be retained for VRS population.

For the *AREA\_DFLT* table the fields *RegionCode* and *AreaCode* will be retained for VRS population.

For the *ST\_DFLT* table the field *StateCode* will be retained for VRS population.

For the *REGN\_DFLT* table the fields *RegionCode* will be retained for VRS population.

For the *GRP\_DFLT* table the fields *GroupId* will be retained for VRS population.

#### *DFLT*

Using the *BusinessType* and *DefaultNumber* as obtained through the *xxxxx\_DFLT* retrieval, all appropriate rows will be retrieved from the DFLT table.

Further selection criteria are also applied:

- The rows with a *RecordStatusCode* equal to <null> or 'Inactive' will be retrieved.
- 
- The fields *StartDate* and *EndDate* will be retained for examination/usage at a later stage.

#### *DFLT\_RATE\_PLAN*

Using the *BusinessType* and *DefaultNumber* all appropriate rows will be retrieved from the DFLT\_RATE\_PLAN table.

Further selection criteria are also applied:

- The rows with a *RecordStatusCode* equal to <null> or 'Inactive' will be retrieved
- The fields *RatePlanSeqNbr* and *GroupId* will be retained and used to retrieve the corresponding data from the RATE\_PLAN table.

#### *RATE\_PLAN*

Using the *RatePlanSeqNbr* and *GroupId* as obtained through the DFLT\_RATE\_PLAN retrieval, all appropriate rows will be retrieved from the RATE\_PLAN table.

Further selection criteria are also applied:

- The rows with a *RecordStatusCode* equal to <null> or 'Inactive' will be retrieved
- *BusinessTypeCode* may be null or must match the *BusinessTypeCode* from the DFLT\_RATE\_PLAN table.
- The fields *RatePlanDiscription*, *StartDate* and *EndDate* will be retained for examination/usage at a later stage.

#### PLAN\_UNIT\_RATE

Using the *GroupId* and *RatePlanSeqNbr* as obtained through the RATE\_PLAN retrieval, all appropriate rows will be retrieved from the PLAN\_UNIT\_RATE table. Further selection criteria are also applied:

- The rows with a *RecordStatusCode* equal to <null> or 'Inactive' will be retrieved
- Only the rows with a *RateTypeCode* in Hourly, Daily, Weekly, Monthly and Special will be retrieved, thus ignoring RNT, PKG & PCT.
- The fields *CarClassId*, *CarClassSuffixId*, *RateTypeCode*, *RateAmt*, *FreeMilesLimit*, *UnlimitedMileageFlag*, *ExcessMileageCharge*, *StartKeyDateTime* and *EndDate* will be retained for examination/usage at a later stage.

#### RATE\_TYP

Using the *RateTypeCode* as obtained through the PLAN\_UNIT\_RATE retrieval, all rate types are retrieved. These *RateTypes* will be used by the VRS population logic to populate the appropriate amount column and mileage column.

#### REMARKS

The Rates Conversion program will provide a mechanism, through *Conversion Temp Tables* (CONV\_PROD\_XREF) where the *General Conditions*, *Coverage* and *Additional Product* conversion programs can determine to which *ProductInstance* a *RatePlan* has been setup with and which *UserDefinedArea* had been used.

If the occasion arises where the whole retrieval process cannot be satisfied, eg: if a *RecordStatusCode* in one off the ECARS tables has been flagged as 'Delete'. The conversion process will not convert this row but output the appropriate information to a *NotConverted* file. This *NotConverted* mechanism will be driven through a command line argument, allowing for it to be switched on or off. The default will be off.

The conversion process will also produce a flat file containing a list of orphan rateplans, which were identified as not being used at any level of the hierarchy.

### 2.5.1.6 Source and Target Table Impacts

Source Tables	Target Tables
BR_DFLT	
AREA_XCHNG_DFLT	
ZIP_CODE_DFLT	
AREA_DFLT	
ST_DFLT	
REGN_DFLT	
GRP_DFLT	
DFLT	
DFLT_RATE_PLAN	
RATE_PLAN	
PLAN_UNIT_RATE	
RATE_TYP	
	RATES HEADER
	RATE_DETAIL_USAGES
	RATE DETAILS
	PROD AVLS
	<b>RATE_QUAL_ASSNS</b>
	CONV_PROD_XREF

[illegible]

## 2.5.1.7 Detailed Table / Column Mapping

This section consists out off two views, the first view being a view from the ECARS database side with a limited view of the VRS database. The second view being a view from the VRS database and how/where the ECARS data will be converted and how the ECARS data will be represented in VRS.

Ecars View

ECARS TABLE.FieldName	Usage	VRS TABLE.FieldName
BR_DFLT.BusinessTypeCode	Used to select 'Retail	RATES_HEADER.ProductTypeCode
BR_DFLT.GroupId	Based upon the GroupId and BranchId, the conversion software will produce an appropriate UserDefinedAreald cross-referencing to the PeopleSoft codes and tie it to an AreaType of ATY BR	RATES_HEADER.UserDefinedAreald
BR_DFLT.BranchId		
BR_DFLT.DefaultNbr	Used for join to the DFLT Table	
BR_DFLT.RecordStatusCode	Used by selection criteria	
BR_DFLT.AddDate	See VRS Population Rules Section	
BR_DFLT.AddTime		
BR_DFLT.AddEmpNbr	Not used	
BR_DFLT.AddPgmJobName	Not used	
BR_DFLT.ChangeDate	See VRS Population Rules Section	
BR_DFLT.ChangeTime		
BR_DFLT.ChangeEmpNbr	Not used	
BR_DFLT.ChangePgmJobName	Not used	
AREA_XCHNG_DFLT.BusinessTypeCode	Used to select 'Retail	RATES_HEADER.ProductTypeCode
AREA_XCHNG_DFLT.AreaCode	Based upon the AreaCode and AreaExchangeNbr, the conversion software will produce an appropriate UserDefinedAreald cross-referencing to the PeopleSoft codes and tie it to an AreaType of ATY_XCHNG	RATES_HEADER.UserDefinedAreald
AREA_XCHNG_DFLT.AreaExchangeNbr		
AREA_XCHNG_DFLT.DefaultNbr	Used for join to the DFLT Table	

ECARS TABLE.FieldName	Usage	VRS TABLE.FieldName
AREA_XCHNG_DFLT.RecordStatusCode	Used by selection criteria	
AREA_XCHNG_DFLT.AddDate	See <i>VRS Population Rules Section</i>	
AREA_XCHNG_DFLT.AddTime		
AREA_XCHNG_DFLT.AddEmpNbr	Not used	
AREA_XCHNG_DFLT.AddPgmJobName	Not used	
AREA_XCHNG_DFLT.ChangeDate	See <i>VRS Population Rules Section</i>	
AREA_XCHNG_DFLT.ChangeTime		
AREA_XCHNG_DFLT.ChangeEmpNbr	Not used	
AREA_XCHNG_DFLT.ChangePgmJobName	Not used	
ZIP_CDE_DFLT.BusinessTypeCode	Used to select 'R'etail	RATES_HEADER.ProductTypeCode
ZIP_CDE_DFLT.ZipCode	Based upon the ZipCode, the conversion software will produce an appropriate UserDefinedAreaId cross-referencing to the <i>PeopleSoft</i> codes and tie it to an AreaType of ATY ZIP	RATES_HEADER.UserDefinedAreaId
ZIP_CDE_DFLT.DefaultNbr	Used for join to the DFLT Table	
ZIP_CDE_DFLT.RecordStatusCode	Used by selection criteria	
ZIP_CDE_DFLT.AddDate	See <i>VRS Population Rules Section</i>	
ZIP_CDE_DFLT.AddTime		
ZIP_CDE_DFLT.AddEmpNbr	Not used	
ZIP_CDE_DFLT.AddPgmJobName	Not used	
ZIP_CDE_DFLT.ChangeDate	See <i>VRS Population Rules Section</i>	
ZIP_CDE_DFLT.ChangeTime		
ZIP_CDE_DFLT.ChangeEmpNbr	Not used	
ZIP_CDE_DFLT.ChangePgmJobName	Not used	
AREA_DFLT.BusinessTypeCode	Used to select 'R'etail	RATES_HEADER.ProductTypeCode
AREA_DFLT.RegionCode	Not used	
AREA_DFLT.AreaCode	Based upon the AreaCode, the conversion software will produce an appropriate UserDefinedAreaId cross-referencing to the <i>PeopleSoft</i> codes and tie it to an AreaType of ATY AREA	RATES_HEADER.UserDefinedAreaId
AREA_DFLT.DefaultNbr	Used for join to the DFLT Table	
AREA_DFLT.GroupId	Not Used	

ECARS TABLE.FieldName	Usage	VRS TABLE.FieldName
AREA DFLT.RecordStatusCode	Used by selection criteria	
AREA DFLT.AddDate	See VRS Population Rules Section	
AREA DFLT.AddTime		
AREA DFLT.AddEmpNbr	Not used	
AREA DFLT.AddPgmJobName	Not used	
AREA DFLT.ChangeDate	See VRS Population Rules Section	
AREA DFLT.ChangeTime		
AREA DFLT.ChangeEmpNbr	Not used	
AREA DFLT.ChangePgmJobName	Not used	
ST DFLT.BusinessTypeCode	Used to select 'Retail	RATES HEADER.ProductTypeCode
ST DFLT.StateCode		RATES HEADER.UserDefinedAreaId
ST DFLT.DefaultNbr	Used for join to the DFLT Table	
ST DFLT.RecordStatusCode	Used by selection criteria	
ST DFLT.AddDate	See VRS Population Rules Section	
ST DFLT.AddTime		
ST DFLT.AddEmpNbr	Not used	
ST DFLT.AddPgmJobName	Not used	
ST DFLT.ChangeDate	See VRS Population Rules Section	
ST DFLT.ChangeTime		
ST DFLT.ChangeEmpNbr	Not used	
ST DFLT.ChangePgmJobName	Not used	
REGN DFLT.BusinessTypeCode	Used to select 'Retail	RATES HEADER.ProductTypeCode
REGN DFLT.RegionCode	Based upon the RegionCode, the conversion software will produce an appropriate UserDefinedAreaId cross-referencing to the PeopleSoft codes and tie it to an AreaType of ATY_RGN	RATES HEADER.UserDefinedAreaId
REGN DFLT.GroupId	Not used	
REGN DFLT.DefaultNbr	Used for join to the DFLT Table	
REGN DFLT.RecordStatusCode	Used by selection criteria	
REGN DFLT.AddDate	See VRS Population Rules Section	
REGN DFLT.AddTime		
REGN DFLT.AddEmpNbr	Not used	

ECARS TABLE.FieldName	Usage	VRS TABLE.FieldName
REGN_DFLT.AddPgmJobName	Not used	
REGN_DFLT.ChangeDate	See VRS Population Rules Section	
REGN_DFLT.ChangeTime		
REGN_DFLT.ChangeEmpNbr	Not used	
REGN_DFLT.ChangePgmJobName	Not used	
GRP_DFLT.BusinessTypeCode	Used to select 'Retail'	RATES HEADER.ProductTypeCode
GRP_DFLT.GroupId	Based upon the GroupId, the conversion software will produce an appropriate UserDefinedAreaId cross-referencing to the PeopleSoft codes and tie it to an AreaType of ATY GRP	RATES HEADER.UserDefinedAreaId
GRP_DFLT.DefaultNbr	Used for join to the DFLT Table	
GRP_DFLT.RecordStatusCode	Used by selection criteria	
GRP_DFLT.AddDate	See VRS Population Rules Section	
GRP_DFLT.AddTime		
GRP_DFLT.AddEmpNbr	Not used	
GRP_DFLT.AddPgmJobName	Not used	
GRP_DFLT.ChangeDate	See VRS Population Rules Section	
GRP_DFLT.ChangeTime		
GRP_DFLT.ChangeEmpNbr	Not used	
GRP_DFLT.ChangePgmJobName	Not used	
DFLT.BusinessTypeCode	Used to select 'Retail'	
DFLT.DefaultNbr	Used to join to other SI tables	
DFLT.StartDate	See VRS Population Rules Section	
DFLT.StartTime		
DFLT.EndDate	See VRS Population Rules Section	
DFLT.EndTime		
DFLT.LocationDesc	Not used	
DFLT.DefaultCarPrefDesc	Not used	
DFLT.DefaultFuelOneDesc	Not used	
DFLT.DefaultFuelTwoDesc	Not used	
DFLT.RecordStatusCode	Used by selection criteria	
DFLT.AddDate	See VRS Population Rules Section	
DFLT.AddTime		



ECARS TABLE.FieldName	Usage	VRS TABLE.FieldName
DFLT.AddEmpNbr	Not used	
DFLT.AddPgmJobName	Not used	
DFLT.ChangeDate	See VRS Population Rules Section	
DFLT.ChangeTime		
DFLT.ChangeEmpNbr	Not used	
DFLT.ChangePgmJobName	Not used	
DFLT.RATE.PLAN.BusinessTypeCode	Used to join to RATE.PLAN	
DFLT.RATE.PLAN.DefaultNbr	Used to join to RATE.PLAN	
DFLT.RATE.PLAN.RatePlanSeqNbr	Used to join to RATE.PLAN	
DFLT.RATE.PLAN.GroupId	Used to join to RATE.PLAN	
DFLT.RATE.PLAN.RecordStatusCode	Used by selection criteria	
DFLT.RATE.PLAN.AddDate	Not Used	
DFLT.RATE.PLAN.AddTime		
DFLT.RATE.PLAN.AddEmpNbr	Not Used	
DFLT.RATE.PLAN.AddPgmJobName	Not Used	
DFLT.RATE.PLAN.ChangeDate	Not Used	
DFLT.RATE.PLAN.ChangeTime		
DFLT.RATE.PLAN.ChangeEmpNbr	Not Used	
DFLT.RATE.PLAN.ChangePgmJobName	Not Used	
RATE.PLAN.GroupId	Used to join to PLAN_UNIT_RATE	
RATE.PLAN.BusinessTypeCode	Used to select 'Retail'	
RATE.PLAN.RatePlanSeqNbr	Used to join to PLAN_UNIT_RATE	
RATE.PLAN.StartDate	See VRS Population Rules Section	
RATE.PLAN.StartTime		
RATE.PLAN.EndDate	See VRS Population Rules Section	
RATE.PLAN.EndTime		
RATE.PLAN.RatePlanDescription		RATES HEADER.RateHeaderDescription
RATE.PLAN.RecordStatusCode	Used by selection criteria	
RATE.PLAN.AddDate	See VRS Population Rules Section	
RATE.PLAN.AddTime		
RATE.PLAN.AddEmpNbr	Not used	
RATE.PLAN.AddPgmJobName	Not used	
RATE.PLAN.ChangeDate	See VRS Population Rules Section	

ECARS TABLE.FieldName	Usage	VRS TABLE.FieldName
RATE_PLAN.ChangeTime		
RATE_PLAN.ChangeEmpNbr	Not used	
RATE_PLAN.ChangePgmJobName	Not used	
PLAN_UNIT_RATE.GroupId	Used to join from RATE_PLAN	
PLAN_UNIT_RATE.RatePlanSeqNbr	Used to join from RATE_PLAN	
PLAN_UNIT_RATE.CarClassId		RATE_DETAILS.VehicleCategoryCode
PLAN_UNIT_RATE.CarClassSuffixId		RATE_DETAILS.VehicleCategorySuffixCode
PLAN_UNIT_RATE.RateTypeCode	Based upon the value of the RateTypeCode one of the following columns will be populated:	RATE_DETAILS.RateTypeCode
PLAN_UNIT_RATE.RateAmt	HR	RATE_DETAILS.HourAmt
	DAY / SPL	RATE_DETAILS.DayAmt
	WK	RATE_DETAILS.WeekAmt
	MTH	RATE_DETAILS.MonthAmt
	(PCT / PKG / RNT are not converted)	
PLAN_UNIT_RATE.FreeMilesLimit	Based upon the value of the RateTypeCode one off the following columns will be populated.	
	HR	RATE_DETAILS.HourlyMilesNbr
	DAY / SPL	RATE_DETAILS.DailyMilesNbr
	WK	RATE_DETAILS.WeeklyMilesNbr
	MTH	RATE_DETAILS.MonthlyMilesNbr
PLAN_UNIT_RATE.UnlimitedMileageFlag	Used to interpret zero value in FreeMilesLimit	If value is 'Y' the XxxxMilesNbr is set to NULL. If value is 'N' and limits are zero (0), the XxxxMilesNbr will be set to zero (0).
PLAN_UNIT_RATE.ExcessMileageCharge		RATE_DETAILS.ExcessMileAmt
PLAN_UNIT_RATE.StartKeyDate	See VRS Population Rules Section	
PLAN_UNIT_RATE.StartKeyTime	See VRS Population Rules Section	
PLAN_UNIT_RATE.EndDate		
PLAN_UNIT_RATE.EndTime		

ECARS TABLE.FieldName	Usage	VRS TABLE.FieldName
PLAN_UNIT_RATE.RecordStatusCode	Used by selection criteria	
PLAN_UNIT_RATE.AddDate	See VRS Population Rules Section	
PLAN_UNIT_RATE.AddTime		
PLAN_UNIT_RATE.AddEmpNbr	Not used	
PLAN_UNIT_RATE.AddPgmJobName	Not used	
PLAN_UNIT_RATE.ChangeDate	See VRS Population Rules Section	
PLAN_UNIT_RATE.ChangeTime		
PLAN_UNIT_RATE.ChangeEmpNbr	Not used	
PLAN_UNIT_RATE.ChangePgmJobName	Not used	
RATE_TYP_RateTypeCode	Not used	This table will not be used since the RateTypeCode is available from the PLAN_UNIT_RATE table.
RATE_TYP_RateTypeDesc	Not used	
RATE_TYP.SpecialRateInd	Not used	
RATE_TYP_RateTypeSeqNbr	Not used	
RATE_TYP.AllRateSeqNbr	Not used	
RATE_TYP.RecordStatusCode	Not used	
RATE_TYP.AddDate	Not used	
RATE_TYP.AddTime		
RATE_TYP.AddEmpNbr	Not used	
RATE_TYP.AddPgmJobName	Not used	
RATE_TYP.ChangeDate	Not used	
RATE_TYP.ChangeTime		
RATE_TYP.ChangeEmpNbr	Not used	
RATE_TYP.ChangePgmJobName	Not used	

**Rate Sharing**

Since the ECARS and VRS rate-sharing are based upon different philosophies, the conversion process will implement following logic.

The conversion program will upload all the ECARS data into memory, starting from the hierarchy levels and ending at the PlanUnitRates. Once all this data is available the conversion logic will verify which RatePlans/Rates are being shared and by

whom. If sharing happens across hierarchies, the highest hierarchy (starting from ATY\_GRP and ending at ATY\_BR) will be selected as the parent hierarchy.

If sharing happens within the same hierarchy, the first one (sorted alphanumerically) will become the owner.

#### **Rolling up multiple ECARS.PlanUnitRates into one VRS.RateDetails**

Since the ECARS database does not have a concept of combining Hourly/Daily/Weekly & Monthly records into one record, the conversion process, based upon that all data is available in memory, will spin through all uploaded rates and compare availability/applicability at RatePlan and CarClass(Suffix). In the event there are multiple rate types, they will be rolled up into one VRS.RATE\_DETAILS record. Where the situation exists that there are multiple (different) *ExcessMileageCharges* available within the ECARS *to-be-rolled-up* rows, the *ExcessMileage* charge of the Dailly will be used to populate the VRS rate tow.

**\*\* Complete details / flows for rate sharing and rate flattening are provided on the Appendix section of this document \*\*\***

VRS ViewCreation Process

The VRS.RATE\_DETAIL\_USAGES table will be populated by the conversion process and ties the RATES\_HEADER to a specific Rate Detail record (RATE\_DETAILS). The set of dates on the RATE\_DETAIL\_USAGES will be identical to the set of dates on the RATES\_HEADER.

VRS Table	VRS Column	Data Type	VRS Population Rule
RATES_HEADER			
	•RTH_UNIQ_ID	Number(15)	Generated Unique Sequence Number
	•CREATE_DT	Date	Conversion DateTime
	•CREATE_OPER_ID	Varchar(32)	Set to 'CONV SI RTH'
	•CUR_CURR_CD	Varchar(3)	Default value of "USD" for Iteration 3
	•EFFC_START_DT	Date	If a xxxxx_DFLT.AddDate is available, this date will be used. Otherwise the newest Date between DFLT.StartDate / RATE_PLAN.StartDate will be used
	•EFFC_END_DT	Date	If a xxxxx_DFLT.ChangeDate is available and the RecordStatusCode is not null, this date will be used. Otherwise the youngest Date (or open ended) between DFLT.EndDate / RATE_PLAN.EndDate. If the obtained date is bigger then 2037, the EndDate will be set to 203712312359 (YYYYMMDDHHMM).
	•PRT_PROD_TYP_CD	Varchar(2)	Value from PROD_INSTS.PRODS.PRT_PROD_TYP_CD
	•PROD_ID	Varchar(4)	Value from PROD_INSTS.PROD_ID
	•PRC_PROD_INST_CD	Varchar(8)	Tie to Conversion Product for HR/DAY/WK/MTH Rate Types the RTLM products will be used. For SPL the RTSA is used for active rates and the RTSL is used for inactive rates.
	•VER_NBR	Number(3)	Value from PROD_INSTS.VER_NBR
	•PRIM_RATE_IND	Varchar(1)	The sequentially first retrieved active rate for a hierarchy level will be set as the Primary Rate. All subsequent rates for the same location at that hierarchy will be flagged as secondary rates.
	•FUEL_INCL_FLG	Varchar(1)	Value from PROD_INSTS.FUEL_INCL_FLG
	•RATE_TYPE_IND	Varchar(1)	Based upon ECARS.RATE_TYP_RateTypeCode
	•RT_BASE_UNIT_CD	Varchar(1)	Value from PROD_INSTS.RT_BASE_UNIT_CD
	•MAX_DSCNT_RT	Number(5,2)	Value from PROD_INSTS.MAX_DSCNT_RT
	•SALES_TX_INCL_FLG	Varchar(1)	Value from PROD_INSTS.SALE_TX_INCL_FLG (is optional in PROD_INSTS!!!!)
	•UDA_AREA_ID	Varchar(20)	Based upon PeopleSoft xref code using BR_DFLT.GroupId and BR_DFLT.BranchId

VRS Table	VRS Column	Data Type	VRS Population Rule
RATES HEADER (Cont.)	• UDA ATY AREA_TYP	Varchar(10)	Set to 'ATY_xxxx'
	AIRLINE TICKET REQD_IND	Varchar(1)	Value from PROD_INSTS.AIRLINE_TICKET_REQD_IND
	BEST_RT_FLG	Varchar(1)	Value from PROD_INSTS.BEST_RT_FLG
	LOCAL_ONEWAY_IND	Varchar(1)	Set to 'Local'
	SEC_RATE_IND	Varchar(1)	Value from PROD_INSTS.SEC_RATE_IND
	DIFF_APPLY_FLG	Varchar(1)	NULL for Iteration 2
	DSCNT_FLG	Varchar(1)	Value from PROD_INSTS.DSCNT_FLG
	EXR_TYP_CD	Varchar(10)	Value from PROD_INSTS.EXR_TYP_CD
	LST_CHG_DT	Date	NULL
	LST_CHG_USR	Varchar(32)	NULL
	ONE_WAY_ONLY	Varchar(1)	NULL
	PRI_RANK_IND	Number(1)	Not used for ECARS
	PROD_USG_STAT	Varchar(1)	Value from PROD_INSTS.PROD_USG_STAT
	RES_END_DT	Date	Value of RATES_HEADER.EFFC_END_DT
	SPEC_CTY_FLG	Varchar(1)	NULL - Not used for ECARS
	SCHG_INCL_FLG	Varchar(1)	Value from PROD_INSTS.SCHG_INCL_FLG
	BLD_PROD_FLG	Varchar(1)	NULL - Not used for ECARS
	DISC_TYPE_IND	Varchar(1)	NULL - Not used for ECARS
	REC_IND	Varchar(1)	NULL - Not used for ECARS
	BILL_CYC_CDE	Varchar(1)	Set to 'H'
RATE_DETAIL_USAGES	• RH_RTH_UNIQ_ID	Number(15)	Generated Unique Sequence Number
	• CREATE_DT	Date	Conversion DateTime
	• CO_START_DT	Date	Value from RATES_HEADER.EFFC_START_DT
	• CO_END_DT	Date	Value from RATES_HEADER.EFFC_END_DT
	• CREATE_OPER	Varchar(30)	Set to 'CONV SI RTD'
	• RES_START_DT	Date	Value from RATES_HEADER.EFFC_START_DT
	• RES_END_DT	Date	Value from RATES_HEADER.EFFC_END_DT
	• RH_RTH_UNIQ_ID_REF	Number(15)	Value determined by the RatesStarting module
	UPDATE_DT	Date	NULL
	UPDATE_OPER	Varchar(30)	NULL
RATE_DETAILS	• RTD_ID	Number(15)	Generated Unique Sequence Number
	• AUTH_FLG	Varchar(1)	Set to 'A' Authorized
	• CO_STRT_DT	Date	Value from PLAN_UNIT_RATE.StartKeyDateTime
	• CO_END_DT	Date	Value from PLAN_UNIT_RATE.EndDateTime, if this value is null the RATES_HEADER.EFFC_END_DT is used
	• CREATE_DT	Date	Conversion DateTime
	• CREATE_OPER_ID	Varchar(32)	Set to 'CONV SI RTD'
	• RES_START_DT	Date	Value from PLAN_UNIT_RATE.StartKeyDateTime
	• RES_END_DT	Date	Value from PLAN_UNIT_RATE.EndDateTime, if this value is null the RATES_HEADER.EFFC_END_DT is used
	• RH_RTH_UNIQ_ID	Number(15)	Value from RATE_DETAIL_USAGES.RH_RTH_UNIQ_ID_REF

VRS Table	VRS Column	DataType	VRS Population Rule
RATE_DETAILS (Cont.)	RTD_TYPE	Varchar(10)	Set to 'TM' (Time & Mileage)
	VCT_CAT_CD	Varchar(8)	Value from PLAN_UNIT_RATE.CarClassId and PLAN_UNIT_RATE.CarClassSuffixId
	VCT_CAT_SFX_CD	Varchar(4)	Value from PLAN_UNIT_RATE.CarClassSuffixId and PLAN_UNIT_RATE.CarClassSuffixId
	AUTH_DT	Date	Conversion Date/Time
	AUTH_USR_ID	Varchar(32)	Set to 'CONV-BR_DFLT'
	UPDT_DT	Date	NULL
	UPDT_OPER_ID	Varchar(32)	NULL
	HR_AMT	Number(15,3)	If PLAN_UNIT_RATE.RateTypeCode = 'H' set to PLAN_UNIT_RATE.RateAmt
	HR_MIL_NBR	Number(4)	If PLAN_UNIT_RATE.RateTypeCode = 'H' set to PLAN_UNIT_RATE.FreeMilesLimit
	DLY_AMT	Number(15,3)	If PLAN_UNIT_RATE.RateTypeCode = 'D' or 'SPL' set to PLAN_UNIT_RATE.RateAmt
	DLY_MIL_NBR	Number(4)	If PLAN_UNIT_RATE.RateTypeCode = 'D' or 'SPL' set to PLAN_UNIT_RATE.FreeMilesLimit
	WK_AMT	Number(15,3)	If PLAN_UNIT_RATE.RateTypeCode = 'W' set to PLAN_UNIT_RATE.RateAmt
	WK_MIL_NBR	Number(4)	If PLAN_UNIT_RATE.RateTypeCode = 'W' set to PLAN_UNIT_RATE.FreeMilesLimit
	MTH_AMT	Number(15,3)	If PLAN_UNIT_RATE.RateTypeCode = 'M' set to PLAN_UNIT_RATE.RateAmt
	MTH_MIL_NBR	Number(4)	If PLAN_UNIT_RATE.RateTypeCode = 'M' set to PLAN_UNIT_RATE.FreeMilesLimit
	MTH_FACTOR_NBR	Number(2)	If PLAN_UNIT_RATE.RateTypeCode = 'M' set to 30
	EXCESS_MIL_AMT	Number(15,3)	Set to PLAN_UNIT_RATE.ExcessMileageCharge
	PROD_AVI_ID	Number(6)	Unique generated Sequence Number
	AVL_FOR	Varchar(4)	Set to value 'D' default
	EFFC_START_DT	Date	Value from RATES HEADER.EFFC_START_DT
	EFFC_END_DT	Date	Value from RATES HEADER.EFFC_END_DT
	INCL_STAT	Varchar(1)	Set to value 'I' included
	PROD_AVI_TVT	Varchar(3)	Set to value 'R' reservation
	CCO_CNTRLCH_CND_ID	Number(3)	Set to NULL
	GRY_ARMP_CRY_CD	Varchar(2)	Set to NULL
	PRC_PROD_INST_CD	Varchar(8)	Value from RATES HEADER.PRC_PROD_INST_CD
	PRC_VLR_NBR	Number	Value from RATES HEADER.VLR_NBR
	STA_STN_ID	Varchar(10)	Set to NULL
	UDA_AREA_ID	Varchar(10)	Value from RATES HEADER.UDA_AREA_ID
	UDA_AVT_AREA_TVT	Varchar(10)	Value from RATES HEADER.UDA_AVT_AREA_TVT
	DISTR_CHNL_ID	Varchar(12)	Set to value 'BRANCH'
	RH_RTH_UNIQ_ID	Number(15)	Value from RATES HEADER.RTH_UNIQ_ID

VRS Table	VRS Column	Data Type	VRS Population Rule
RATE-HEADER_QUAL_ASSN	•RRHOA_UNIQ_ID	Number(15)	Only populated for SPL (Special) Default Rates
	•CREATE_DT	Date	Unique generated Sequence Number
	•CREATE_OPER	Varchar(30)	Conversion Date Time
	•ETFC_START_DT	Date	Set to 'CONV' SI RHQA
	•ETFC_END_DT	Date	Value from RATES-HEADER-ETFC-START-ET
	•RDE_DRIN_END_CD	Number(6)	Value from RATES-HEADER-ETFC-END-ET
	•RES_START_DT	Date	Tie to SPL (Special) Rate Quid
	•RES_END_DT	Date	Value from RATES-HEADER-ETFC-START-ET
	•RTH_RTH_UNIQ_ID	Number(15)	Value from RATES-HEADER-ETFC-START-ET
	UPDT_DT	Date	Set to NULL
	UPDT_OPER	Varchar(30)	Set to NULL
CONV_PROD_XREF			This table allows subsequent conversion processes to perform cross-referencing and can also be used as an entry-point for investigation.
	DELT_NBR	Number(11)	SI Default Number
	RATE_PLAN_SEQ_NBR	Number(10)	SI Rate Plan Seq Nbr
	•GRP_ID	Varchar(4)	SI GroupId
	•PRT_PROD_TYP_CD	Varchar(2)	VRS Product Type
	PROD_INST_CD	Varchar(8)	VRS Product Instance
	•RTH_UNIQ_ID	Number(15)	VRS Rates Header ID
	OWNG_AREA_ID	Varchar(10)	VRS Owning User Defined Area
	OWNG_AREA_TYP	Varchar(10)	VRS Owning Area Type
	•BUS_TYP_CDE	Varchar(2)	SI Business Type



### 2.5.1.8 Data Dependencies

As the information, provided by the ECARS database, only allows us to populate certain tables and columns of the VRS Rates Model, a number of tables and fields will be populated with defaults.

#### Pre-dependencies

In order to populate rates and the appropriate supporting data, a number of tasks must have happened already:

- Product Types have to be pre-populated (VRS.PROD\_TYPS)
- Product Families have to be pre-populated (VRS.PRODS)
- Product Instance(s) for conversion have to be pre-populated (VRS.PROD\_INSTS) as well as their Product Availability (VRS.PROD\_AVLS).
- A RateQual has to be pre-populated (VRS.RNT\_DRTN\_BNDS) for SPL (Special) Rates
- User Defined Areas have to be pre-populated (VRS.USR\_DFND\_AREAS / VRS.STA\_UDA)

### 2.5.1.9 Manual Conversion

N/A

### 2.5.1.10 Assumptions

- RatePlans with no rates will not be converted
- RatePlans with rates and not associated to one of the hierarchies will not be converted
- In the case where it was determined that a RatePlan/Rate was shared between hierarchies, the VRS.RatesHeader will be tied to the appropriate UserDefinedArea at the highest Hierarchy Level, i.e. starting from AYT\_GRP down to ATY\_BR.
- No specific rate qualifications will be established for retail products, with the exception of one RateQual for SPL (Special) Rates. Where the occasion exists where the *default conversion RateQual* does not meet the typical SPL (Special) business policies, Enterprise will have to create a new RateQual manually, and re-tied the non-standard RateQual to the RatesHeader.
- Since inactive Rates (rec\_stat\_cde = 'I') will only be available for referencing, i.e. not to be quoted back to the customer, these will be tied to the *Inactive Product*.
- Default weekend special qualification association record will be created as part of the Iteration 3 conversion. ERAC will be responsible for manual creation post implementation.

### 2.5.1.11 Issues

N/A

### 2.5.1.12 Data Volumetrics

Will be provided as a part of the conversion deliverable at the end of iteration 3.

### 2.5.1.13 Data Validation Criteria

Data validation will happen through SQL scripts, RatesEngine test harness and investigating the *NotConverted* and log files. ERAC will be responsible for investigating the exceptions and making corrections as required on AS/400 and re-converting into Oracle.

## 2.5.2 NatRes Rates

We assume that a Flat File representation of the two main NatRes tables (i.e. NRARates & NRXRates) will be made available in our Oracle Conversion DB Instance.

The current NRARates & NRXRates data used for analysis are partial extracts. A new extract will be required prior to conversion.

### 2.5.2.4 Data Transformation Rules

The NatRes conversion retrieval will consist of one Retrieval process. NatRes rates are only applicable for one *hierarchy level*, Branch Level. The table below shows some volumetrics, the content of the NatRes tables were provided by Enterprise on July 23 2001.

Level	NatRes Table	Total Rows	# of Rows with EffRateDate >= 31JUL01 All Retail	# of Rows with DscntStopDate < 31JUL01 All Bid	# of Rows with ExcBidRateFlag = B
Branch	NRARATES	331,331	319,365	N/A	N/A
	NRXRATES	71,712	N/A	29	98

### 2.5.2.5 Data Selection Criteria

This section describes the retrieval from the NATRES tables (NRXRATES & NRARATES). For Iteration 3 these two tables, with their data, will be made available within an oracle instance. In future iterations these tables will be updated and used as the *UM Bridge* between the AS400 and the VRS system.

#### NatRes Retrieval

The entry point for the conversion process will be the NRXRates table.

Following filters are in place on retrieving the NRXRates data

- Rows with an *ExceptionBidRateFlag* of 'B' will be retrieved.
- Rows with NRARates.DateofRate between NRXRates.DscntStartDate and NRXRates.DscntStop.Date
- Rows with a *Status* of 'O' and 'R' will be retrieved

Using the *GroupId*, *BranchId*, *Rate category*, *DiscountStartDate*, *DiscountStopDate* and *CarType* from the NRXRates, the rate data will be retrieved from the NRARates table. In addition to the join criteria, a filter is in place to only consider the NRARates rows which have a *RateCategory* of 'R'. Following fields will be retained for VRS transformation/population:

NRXRates

*GroupId*, *BranchId*, *CarType*, *DailyMileage*, *DailyUnlimitedMiles*,  
*DailyExcessMileage*, *WeeklyMileage*, *WeeklyUnlimitedMileage*,

*WeeklyExcessMileage, MonthlyMileage, MonthlyUnlimitedMiles,  
MonthlyExcessMileage.*

NRARates

*DateOfRate, Day1RentalPrice, Day2RentalPrice, Day3RentalPrice,  
Day4RentalPrice, WeeklyRentalPrice, MonthlyRentalPrice.*

### 2.5.2.6 Source and Target Table Impacts

Source Tables	Target Tables
NRXRATES	
NRARATES	
	RATES_HEADER
	RATE_DETAIL_USAGES
	RATE_DETAILS
	PROD_AVLS

## 2.5.2.7 Detailed Table/Column Mapping

This section consists out of two views, the first view being a view from the NatRes database side with a limited view of the VRS database. The second view being a view from the VRS database and how/where the NatRes data will be converted into the VRS Data Model.

NatRes View

NatRes Table. FieldName	Usage	VRS Table. FieldName
NRXRates.GroupId NRXRates.BranchId	Based upon the GroupId and BranchId, the conversion software will produce an appropriate UserDefinedAreaId, cross-referencing to the <i>PeopleSoft</i> codes and tie it to an AreaType of ATY BR	RATES_HEADER.UserDefinedAreaId RATES_HEADER.UDAAreaType
NRXRates.PreArrangedDiscount	Not Used. After investigation, for all records with an <i>ExceptionBidRateFlag</i> = 'B' the code was populated with value 'R'.	
NRXRates.CarType		RATE_DETAILS.VehicleCategoryCode
NRXRates.DiscountStartDate	Used as start date range for the join with NRARates	
NRXRates.DiscountStopDate	Used as stop date range for the join with the NRARates	
NRXRates.DailyRate	Not Used	
NRXRates.DailyMileage	Number of Free Miles per Day.	RATE_DETAILS.DailyMilesNbr
NRXRates.DailyUnlimitedMiles	Values 'X' & 'U' mean Unlimited. Value <null> means Limited mileage and ExcessCharge applicable.	
NRXRates.DailyExcessMileage		RATE_DETAILS.ExcessMileAmt

NatRes Table. FieldName	Usage	VRS Table.FieldName
NRXRates.WeeklyRate	Not Used	
NRXRates.WeeklyMileage	Number of Free Miles per Week	RATE_DETAILS.WeeklyMilesNbr
NRXRates.WeeklyUnlimitedMiles	Values 'X' & 'U' mean Unlimited. Value <null> means Limited mileage and ExcessCharge applicable.	
NRXRates.WeeklyExcessMileage	If a Daily Excess Mileage charge is available, this one will be ignored	RATE_DETAILS.ExcessMileAmt
NRXRates.MonthlyRate	Not Used	
NRXRates.MonthlyMileage	Number of Free Miles per Month	RATE_DETAILS.MonthlyMilesNbr
NRXRates.MonthlyUnlimitedMiles	Values 'X' & 'U' mean Unlimited. Value <null> means Limited mileage and ExcessCharge applicable.	
NRXRates.MonthlyExcessMileage	If a Daily Excess Mileage charge is available, this one will be ignored	RATE_DETAILS.ExcessMileAmt
NRXRates.WeekendRate	Not Used	
NRXRates.WeekendMileage	Not Used	
NRXRates.WeekendUnlimitedMiles	Not Used	
NRXRates.WeekendExcessMileage	Not Used	
NRXRates.Status	Select values of 'O' and 'R'	
NRXRates.Commission	Not Used	
NRXRates.Discount	Not Used	
NRXRates.ExceptionBidRateFlag	Used by selection criteria, select value 'B'id	
NRXRates.AddProgram	Not Used	
NRXRates.AddEmployee	Not Used	
NRXRates.AddDate	Not Used	
NRXRates.AddTime	Not Used	
NRXRates.ChangeProgram	Not Used	
NRXRates.ChangeEmployee	Not Used	
NRXRates.ChangeDate	Not Used	
NRXRates.ChangeTime	Not Used	

NatRes Table. FieldName	Usage	VRS Table. FieldName
NRARates.GroupId	Used to join from the NRXRates table	
NRARates.B ranchId	Used to join from the NRXRates table	
NRARates.RateCategory	Used by selection criteria, select value 'R'etail	
NRARates.CarType	Used to join from the NRXRates table	
NRARates.DateOfRate	Used to join from the NRXRates table, where the DateOfRate is between the max(DscentStartDate) and DscentStopDate	
NRARates.Day1RentalPrice		RATE_DETAILS.BaseRate
NRARates.Day1RateOpenOnCRS	Not Used	
NRARates.Day2RentalPrice		RATE_DETAILS.Plus1Amt
NRARates.Day2RateOpenOnCRS	Not Used	
NRARates.Day3RentalPrice		RATE_DETAILS.Plus2Amt
NRARates.Day3RateOpenOnCRS	Not Used	
NRARates.Day4RentalPrice		RATE_DETAILS.Plus3Amt
NRARates.Day4RateOpenOnCRS	Not Used	
NRARates.WeeklyRentalPrice		RATE_DETAILS.WkAmt
NRARates.WeeklyRateOpenOnCRS	Not Used	
NRARates.MonthlyRentalPrice		RATE_DETAILS.MthAmt
NRARates.MonthlyRateOpenOnCRS	Not Used	
NRARates.AddDate	See VRS Population Rules Section	RATE_DETAILS.ResStartDt
NRARates.AddTime	Not Used	
NRARates.AddProgram	Not Used	
NRARates.AddEmployee	Not Used	
NRARates.ChangeDate	See VRS Population Rules Section	RATE_DETAILS.ResStartDt
NRARates.ChangeTime	Not Used	
NRARates.ChangeProgram	Not Used	
NRARates.ChangeEmployee	Not Used	

Consolidation of NatRes duplicate rate/mileage records for consecutive days

When the conversion process detects a situation where duplicate (i.e. identical Mileage and Rate information) records for consecutive days exist, the conversion logic will consolidate these records into one row in VRS, this row will have its CheckOutStart and CheckOutEnd Dates set to reflect the number of consecutive days that were identified as duplicate.

VRS ViewCreation Process

The VRS.RATE\_DETAIL\_USAGES table will be populated by the conversion process and ties the RATES\_HEADER to a specific Rate Detail record (RATE\_DETAILS). The set of dates on the RATE\_DETAIL\_USAGES will be identical to the set of dates on the RATES\_HEADER.

VRS Table	VRS Column	Data Type	VRS Population Rule
RATES_HEADER			
	•RTH UNIQ ID	Number(15)	Generated Unique Sequence Number
	•CREATE DT	Date	Conversion Date/Time
	•CREATE OPER ID	Varchar(32)	Set to 'CONV-NR-RTH'
	•CUR CURR CD	Varchar(3)	Default value of "USD" for Iteration 3
	•EFFC START DT	Date	Conversion Date/Time
	•EFFC END DT	Date	Set to HighDate (20371231235959)
	•PRT PROD_TYP_CD	Varchar(2)	Value from PROD_INSTS-PRODS.PRT_PROD_TYP_CD
	•PROD ID	Varchar(4)	Value from PROD_INSTS.PRD_PROD_ID
	•PRC PROD INST CD	Varchar(8)	Tie to UM-Conversion Product (RTLUM)
	•VER_NBR	Number(3)	Tie to UM-Conversion Product
	•PRIM_RATE_IND	Varchar(1)	For UM Rates, always set to 'P'primary
	•FUEL_INCL_FLG	Varchar(1)	Value from PROD_INSTS.FUEL_INCL_FLAG
	•RATE_TYPE_IND	Varchar(1)	Set to 'B'id
	•RT_BASE_UNIT_CD	Varchar(1)	Set to 'B'id
	•MAX_DSCNT_RT	Number(5,2)	Value defaulted to 50
	•SALES_TX_INCL_FLG	Varchar(1)	Value from PROD_INSTS.SALE_TX_INCL_FLG
	•UDA_AREA_ID	Varchar(20)	Peoplesoft key based upon NRXRates.GroupId and NRXRates.BranchId
	•UDA_ATY_AREA_TYP	Varchar(10)	Value defaulted to ATY_BR
	AIRLINE_TICKET_REQD_IND	Varchar(1)	Not used for ECARS
	BEST_RT_FLG	Varchar(1)	Not used for ECARS
	LOCAL_ONEWAY_IND	Varchar(1)	Set to 'L'ocal
	SEC_RATE_IND	Varchar(1)	Value from PROD_INSTS.SEC_RATE_IND
	DIFF_APPLY_FLG	Varchar(1)	Not used for ECARS
	DSCNT_FLG	Varchar(1)	Value defaulted to "Y"
	EXR_TYP_CD	Varchar(10)	Not used for ECARS
	LST_CHG_DT	Date	NULL
	LST_CHG_USR	Varchar(32)	NULL
	ONE_WAY_ONLY	Varchar(1)	NULL



VRS Table	VRS Column	Data Type	VRS Population Rule
RATES HEADER (Cont.)	PRI RANK IND	Number(1)	Not used for ECARS
	PROD_USG_STAT	Varchar(1)	Value from PROD_INSTS.PROD_USG_STAT
	RES_END_DT	Date	Open Ended, value <NULL>
	SPEC_CTY_FLG	Varchar(1)	Not used for ECARS
	SCHG_INCL_FLG	Varchar(1)	Value from PROD_INSTS.SCHG_INCL_FLG
	BLD_PROD_FLG	Varchar(1)	NULL - Not used for ECARS
	DISC_TYPE_IND	Varchar(1)	NULL - Not used for ECARS
	REC_IND	Varchar(1)	NULL - Not used for ECARS
	BILL_CYC_CDE	Varchar(1)	Value from PROD_TYPS.BILL_CYC_CDE
RATE DETAIL USAGES	•RH_RTH_UNIQ_ID	Number(15)	Generated Unique Sequence Number
	•CREATE_DT	Date	Conversion Date/Time
	•CO_START_DT	Date	Value from RATES_HEADER.EFFC_START_DT
	•CO_END_DT	Date	Value from RATES_HEADER.EFFC_END_DT
	•CREATE_OPER	Varchar(30)	Set to 'CONV-NR-RDU'
	•RES_START_DT	Date	Value from RATES_HEADER.EFFC_START_DT
	•RES_END_DT	Date	Value from RATES_HEADER.EFFC_END_DT
	•RH_RTH_UNIQ_ID_REF	Number(15)	Value of RATE_DETAIL_USAGES.RH_RTH_UNIQ_ID
	UPDATE_DT	Date	NULL
	UPDATE_OPER	Varchar(30)	NULL
RATE DETAILS	•RTD_ID	Number(15)	Generated Unique Sequence Number
	•AUTH_FLG	Varchar(1)	Set to 'A' authorized
	•CO_STRT_DT	Date	Value from NRARates.DateOfRate + '000000'
	•CO_END_DT	Date	Value from NRARates.DateOfRate + '235959'
	•CREATE_DT	Date	Conversion Date/Time
	•CREATE_OPER_ID	Varchar(32)	Set to 'CONV-NR-RTD'
	•RES_STRT_DT	Date	Value from NRARates.Adddate or NRARATES.Changedate or RATES_HEADER.EFFC_START_DT (the earliest)
	•RES_END_DT	Date	Value from RATES_HEADER.EFFC_END_DT
	•RH_RTH_UNIQ_ID	Number(15)	Value from RATE_DETAIL_USAGES.RH_RTH_UNIQ_ID
	•RTD_TYPE	Varchar(10)	Set to 'BID'
	•VCT_CAT_CD	Varchar(8)	Value from NRARates.CarType
	•VCT_CAT_SFCD	Varchar(4)	Set to '***'
	AUTH_DT	Date	Conversion Date/Time
	AUTH_USR_ID	Varchar(32)	Set to 'CONV-NR-RTD'
	UPDT_DT	Date	NULL
	UPDT_OPER_ID	Varchar(32)	NULL
	BASE_DAYS	Number(3)	Set to 1
	BASE_RT	Number(15,3)	NRARates.Day1RentalPrice
	PLUS1_AMT	Number(15,3)	NRARates.Day2RentalPrice
	PLUS2_AMT	Number(15,3)	NRARates.Day3RentalPrice
	PLUS3_AMT	Number(15,3)	NRARates.Day4RentalPrice
	DLY_MIL_NBR	Number(4)	NRARates.DailyMileage
	WK_AMT	Number(15,3)	NRARates.WeeklyRentalPrice

VRS Table	VRS Column	Data Type	VRS Population Rule
RATE_DETAILS (Cont.)	WK_MIL_NBR	Number(4)	NRXRates.WeeklyMileage
	MTH_AMT	Number(15,3)	NRARates.MonthlyRentalPrice
	MTH_MIL_NBR	Number(4)	NRXRates.MonthlyMileage
	MTH_FACTOR_NBR	Number(2)	Set to 30
	EXCESS_MIL_AMT	Number(15,3)	NRXRates.DailyExcessMileage / WeeklyExcessMileage or MonthlyExcessMileage. This order will be respected, meaning if a DailyExcess is available, the Daily will be used. If no DailyExcess is available WeeklyExcess is used. If no Daily & Weekly is available, MonthlyExcess is used. Checks will be in place to insure Rate buckets are also inspected. If the situation exists where there is a mixture of Limited & Unlimited mileage, an exception will be generated and the data will not be converted.
	XTRA_HR_AMT	Number(15,3)	Not populated. May be in scope for Iteration 4
	XTRA_DAY_AMT	Number(15,3)	Not populated. May be in scope for Iteration 4
	XTRA_WK_AMT	Number(15,3)	Not populated. May be in scope for Iteration 4
			XtraWeekAmt is currently not available in the VRS Model.
PROD_AVLS			Also know as Reservation Applicability. The NatRes conversion requires the creation of 3 rows in the ProdAvls for each RatesHeader. The reason being that NatRes Rates are available for Web, GDS and Voice reservations.
	•PROD_AVL_ID	Number(6)	Unique generated Sequence Number
	•AVL_FOR	Varchar(1)	Set to value 'D' default
	•EFFC_START_DT	Date	Value from RATES_HEADER.EFFC_START_DT
	•EFFC_END_DT	Date	Value from RATES_HEADER.EFFC_END_DT
	•INCL_STAT	Varchar(1)	Set to value 'I' included
	•PROD_AVL_TYP	Varchar(1)	Set to value 'R' reservation
	CCO_CNTRCTL_CND_ID	Number(8)	Set to NULL
	CRY_ARIMP_CRY_CD	Varchar(2)	Set to value 'US' for Iteration 3
	PRC_PROD_INST_CD	Varchar(8)	Value from RATES_HEADER.PRC_PROD_INST_CD
	PRC_VER_NBR	Number	Value from RATES_HEADER.VER_NBR
	STA_STN_ID	Varchar(10)	Set to NULL
	UDA_AREA_ID	Varchar(10)	Value from RATES_HEADER.UDA_AREA_ID
	UDA_ATY_AREA_TYP	Varchar(10)	Value from RATES_HEADER.UDA_ATY_AREA_TYP
	•DISTR_CHNL_ID	Varchar(12)	3 rows are created per RatesHeader, the values will be 'WEB', 'GDS' and 'VOICE'
	•RH_RTH_UNIQ_ID	Number(15)	Value from RATE_DETAIL.USAGES.RH_RTH_UNIQ_ID
			This table allows subsequent conversion processes to perform cross-referencing and can also be used as an entry-point for investigation.
CONV_PROD_XREF	DFLT_NBR	Number(11)	Not Populated for NatRes conversion
	RATE_PLAN_SEQ_NBR	Number(10)	Not Populated for NatRes conversion
	•GRP_ID	Varchar(4)	Natres GroupId+BranchId
	•PRT_PROD_TYP_CD	Varchar(2)	VRS ProductType
	PROD_INST_CD	Varchar(8)	VRS ProductInstance
	•RTH_UNIQ_ID	Number(15)	VRS RatesHeader ID
	OWNG_AREA_ID	Varchar(10)	VRS OwningUserDefinedArea
	OWNG_AREA_TYP	Varchar(10)	VRS OwningAreaType

VRS Table		VRS Column	Data Type	VRS Population Rule
		BUS_TYP_CDE	Varchar(2)	Values set to 'R' etail

### 2.5.2.8 Data Dependencies

As the information, provided by the NatRes database only allows us to populate certain tables and columns of the VRS Rates Model, a number of tables and fields will be populated with defaults

#### Pre-dependencies

In order to populate rates and the appropriate supporting data, a number of tasks must have happened already:

- Product Types have to be pre-populated (VRS.PROD\_TYPS)
- Product Families have to be pre-populated (VRS.PRODS)
- Product Instance RTLUM, for NatRes conversion has to be pre-populated (VRS.PROD\_INSTS) as well as their Product Availability (VRS.PROD\_AVLS)

### 2.5.2.9 Manual Conversion

N/A

### 2.5.2.10 Assumptions

- For the *First Cut Conversion* the NRARates & NRXRates tables will be made available in Oracle equivalent tables within a Conversion DB Instance
- NatRes rates only represent Vehicle Rates, i.e. Coverage Rates, Additional Product Rates, Messages and rules will not be converted (*The NR042P and SI-TX07 files are out of scope for the VRS Conversion*).
- There will be no conversion of History, only rates effective as of the conversion date will be converted.
- All NatRes rates are at Branch Level, i.e. no Hierarchy logic on NatRes conversion.
- All NatRes rates will be tied to one Product Code (i.e. RTLUM)
- RateCategory 'R'etail is the only RateCategory which will be converted for Iteration 3.
- Rates are effective for one-day only, therefore (with the exception of duplicates), the VRS CheckOutStart and End Dates will be timestamped with '000000' and '235959' respectively, and will only be available for that one day.
- The VRS Car Suffix will be set to '\*\*', since no suffix is available from NatRes.
- PeopleSoft cross reference keys will have to exist for all NatRes locations.
- *ExtraHour, ExtraDay and ExtraWeek* rates will not be populated as the application design will be addressing them in the next iteration.
- Certain NatRes *Day1/2/3/4 Rates or Weekly & Monthly Rates* may not be available. The conversion process will not interpret the population rules of these and will just populate what has been provided. The responsibility of interpreting the values is within the scope of the *Pricing Engine*.

- Using the NRX entry point for the retrieval process resulted in the selection of 14,870 records.

#### 2.5.2.11 Issues

- There is no requirement currently to classify a rate as Open, Restricted or Closed. This is outside the scope of the current project and might be addressed through the availability engine.
- Do we need to convert any NRA rates that cannot be joined with NRX rates? ERAC has stated that dormant rates in NRA can be reactivated at a later stage. Laurie Bowen from ERAC will validate.
- Our current assumption is that we will not be converting any rules associated with NRA or NRX rates since NRX rates are not being converted. ERAC has stated that deposit, miscellaneous and guarantee rules should be converted as messages. An issue was opened to address this with ERAC.

#### 2.5.2.12 Data Volumetrics

The following table volumetrics are the result of the current data extract from five UM locations:

Source Tables	Target Tables	Number of Rows	Comments
NRXRATES(where Exception/Bid Rate flag = 'B')		98	Retail only
NRARATES		319,365	Retail only
	RATES_HEADER	5	
	RATE_DETAIL_USAGES	5	
	RATE_DETAILS	14,870	<i>Not anticipating duplicates.</i>

#### 2.5.2.13 Data Validation Criteria

Data validation will happen through SQL scripts, RatesEngine test harness and investigating the *NotConverted* and log files. There will also an attribute on the Staging NatRes tables in the Oracle DB which will represent multiple statuses. ERAC will be responsible for investigating the exceptions and making corrections as required on AS/400 and re-converting into Oracle.

## 2.6 Functional Area: Equipment

### 2.6.1 Data Transformation Rules

N/A

### 2.6.2 Data Selection Criteria

N/A

### 2.6.3 Source and Target Table Impacts

Source Tables	Target Tables
PLN_ADDTL_PROD_RATE ADDL_PROD_TYP	EQP_ITEM_TYPS EQP_CHGS STN_EQP_CHGS

### 2.6.4 Detailed Table / Column Mapping

N/A

### 2.6.5 Data Dependencies

Prior to creating equipment types the (RRA\_CHG\_TYPS) table must be populated with all relevant charge types.

### 2.6.6 Manual Conversion

Since only one equipment row has been identified in the analysis of the ECARS.ADDL\_PROD\_TYP table, this will be converted manually for iteration2.

### 2.6.7 Assumptions

Manual conversion due to a low volume of equipment items.

### 2.6.8 Issues

N/A

### 2.6.9 Data Volumetrics

1

### 2.6.10 Data Validation Criteria

Data validation will happen through SQL scripts, RatesEngine test harness and investigating the *NotConverted* and log files.

## 2.7 Functional Area : Ancillary Charges

Due to the Age Limit requirements, it has been decided that UNDERAGE (Young Renter Fee) records will not be converted. Section will remain for reference purposes only, this mapping can be used if required in future iterations. (Ignore anything referenced as 'UNDERAGE')

### 2.7.1 Data Transformation Rules

In ECARS, currently we have 'ADDLDRVR' and 'UNDERAGE' as additional products. There are more additional products defined in the system, but based on the data investigation, only these two need to be converted with relation to 'R'etail Default Products in iteration 2.

Complete List of Additional products in ADDL\_PROD\_TYP table and counts from PLN\_ADDTL\_PROD\_RATE table is provided below.

Product	Description	Number of rows in PLN_ADDTL_PROD_RATE table
ADDLDRVR	Additional Driver	166
UNDERAGE	Underage Driver	42
BABYSEAT	Baby Seat	0
SKI RACK	Ski Rack	1
OVER 70	Driver over 70 years old	0
UNKNOWN		3
FUTURE ('D' – Deleted status)		0
CHARGE ('D' – Deleted status)	Additional charge	0

There are two tables in SI that stores additional product information.

1. ADDL\_PROD\_TYP – a reference table which defines the additional product
2. PLN\_ADDTL\_PROD\_RATE – stores additional product rates information related to the rate plans.

The PLN\_ADDTL\_PROD\_RATE table has a relationship with the RATE\_PLAN table through which additional products can be associated with rate plans (Attributes GRP\_ID and RATE\_PLAN\_SEQ\_NBR)

UNDERAGE records from PLN\_ADDTL\_PROD\_RATE table will be written to MIN\_AGE\_RSTRS table in VRS

### 2.7.2 Data Selection Criteria

Additional products are associated with Rate Plans. For conversion purpose, Rate Plans that have defaults will be retrieved along with additional products for that rate plan. If there are additional products for that rate plan, then all the default hierarchies associated with the rate plan will be retrieved and converted as ADDLDRVR / UNDERAGE product at that hierarchy.

Retrieval / Conversion Logic:

- Retrieve all active rate plans from DFLT\_RATE\_PLAN (which will read all the retail rate plans that have defaults), which have Additional products using a JOIN between DFLT\_RATE\_PLAN and PLN\_ADDTL\_PROD\_RATE tables.
  - Select criteria is as follows:
    - The rows with a *BusinessType* of 'R'etail will be retrieved.
    - The rows with a *RecordStatusCode* equal to <null>or 'I'nactive will be retrieved.,
- Convert each hierarchy to an appropriate VRS User Defined Area (UDA) using CONV\_PROD\_XREF table which is populated during Rates conversion. (A common function can be written to use across all the conversion modules).
- Perform validations on the retrieved data.
- Prepare the data into a VRS data structure and write to VRS tables.
- Write the exception errors and conversion history to log files for later inspection.

Data from PLN\_ADDTL\_PROD\_RATE will be written to two tables based on the Additional Product Type.

1. If the Additional Product Type is UNDERAGE, then it will be written to MIN\_AGE\_RSTRS table.
2. If the Addl. Product Type is ADDLDRVR, then it will be written to ADDL\_DVR\_FEES table.

### 2.7.3 Source and Target Table Impacts

Source Tables	Target Tables
BR_DFLT	
AREA_XCHNG_DFLT	
ZIP_CODE_DFLT	
AREA_DFLT	
ST_DFLT	
REGN_DFLT	
GRP_DFLT	
DFLT	
DFLT_RATE_PLAN	
ADDL_PROD_TYP	
PLN_ADDTL_PROD_RATE	
	MIN_AGE_RSTRS
	ADDL_DVR_FEES



## 2.7.4 Detailed Table / Column Mapping

### Underage Conversion (Not being converted)

ECARS TABLE.FieldName	Population Rule	VRS TABLE.FieldName
Xxxx_DFLT.BusinessTypeCode		MIN_AGE_RSTRS.ProductTypeCode
Xxxx_DFLT.GroupId	Based upon the GroupId and BranchId, the conversion module will produce an appropriate UserDefinedAreaId (possibly cross-referencing to the PeopleSoft codes) and tie it to an AreaType of ATY_xxxx	MIN_AGE_RSTRS.UserDefinedAreaId
Xxxx_DFLT.BranchId		MIN_AGE_RSTRS.UserDefinedAreaType
PLN_ADDTL_PROD_RATE.RatePlanSeqNbr	This value is retained for retrieval of Additional products from PLN_ADDTL_PROD_RATE table	No conversion required
PLN_ADDTL_PROD_RATE.AddlProdCde	This value is retained to determine which table the infoamtion need to be written	No conversion required
PLN_ADDTL_PROD_RATE.RateTypeCode PLN_ADDTL_PROD_RATE.AddlChrgAmt	Based on the value of the RateTypeCode, populate one of the following VRS attributes from PLN_ADDTL_PROD_RATE.AddlChrgAmt MIN_AGE_RSTRS.YngRntrFee MIN_AGE_RSTRS.RentalMaxFee	
	If RateTyp = 'DAY'	Populate MIN_AGE_RSTRS.YngRntrFee From PLN_ADDTL_PROD_RATE.AddlChrgAmt
	If RateTyp = 'RNT'	Populate MIN_AGE_RSTRS.YngRntrFee and MIN_AGE_RSTRS.RentalMaxFee From PLN_ADDTL_PROD_RATE.AddlChrgAmt
PLN_ADDTL_PROD_RATE.CntrctOffrInd PLN_ADDTL_PROD_RATE.InclEnrteInd PLN_ADDTL_PROD_RATE.InstructRgmtInd	Not Converted	
PLN_ADDTL_PROD_RATE.MaxAmt	Not converted	
PLN_ADDTL_PROD_RATE.MaxDayNbr		
PLN_ADDTL_PROD_RATE.StrtKeyDte PLN_ADDTL_PROD_RATE.StrtKeyTim	The date and time will be concatenated and stored in Start Date column in VRS	MIN_AGE_RSTRS.StrtDt
PLN_ADDTL_PROD_RATE.EndDte PLN_ADDTL_PROD_RATE.EndTim	The date and time will be concatenated and stored in End Date column in VRS	MIN_AGE_RSTRS.EndDt
PLN_ADDTL_PROD_RATE.RecStatInd RecAddDte RecAddTim RecAddEmpNbr RecAdPgmJobNam RecChngDte RecChngeTim RecChngEmpNbr RecChgPgmJbNam		Not required for conversion. New Audit values will be populated into Audit related columns.

In certain situations, ERAC table information is not sufficient to populate VRS tables completely and some information would have to be filled based on the design guidelines.

VRS Table	VRS Column	Data Type	VRS Population Rule	
MIN_AGE_RSTRS	PRT_PROD_TYP_CDE	Varchar2(2)	Set to 'R' – Retail	
	UDA_AREA_ID	Varchar2(20)	Based upon the GroupId and BranchId, the conversion module will produce an appropriate UserDefinedAreaId (possibly cross-referencing to the PeopleSoft codes) and tie it to an AreaType of ATY_xxxx	
	UDA_ATY_ARRA_TYP	Varchar2(10)		
	VCA_CAT_CD	Varchar2(8)	Set to 'ACAR'	
	VCA_CLASS_SUFEX	Varchar2(4)	Set to '**'	
	FEE_TYPE_CD	Varchar2(1)	Set to 'S' – Standard for Default Products	
	REQ_AGE	Number(3)	Populate a default value = 16	Not available

	MAX_AGE	Number(3)	Populate a default value = 24	Not available
	STRT_DT	Date	Value from PLN_ADDTL_PROD_RATE.StrtKeyDte and StrtKeyTim	
	END_DT	Date	Value from PLN_ADDTL_PROD_RATE.StrtKeyDte and StrtKeyTim	
	YNG_RNTR_FEE	Number(15,3)	Value from PLN_ADDTL_PROD_RATE.AddlChrgAmt if the RateTypCde = 'DAY'	
	RENTAL_MAX_FEE	Number(15,3)	Value from PLN_ADDTL_PROD_RATE.AddlChrgAmt if the RateTypCde = 'RNT'	
	CRY_ARIMP_CRY_CD	Varchar2(2)	NULL -- not required	
	MIN_DVG_LIC_PRD	Number(3,0)	NULL -- not required	
	BTY_TYP	Varchar2(2)	NULL -- not required	

### AddlDriver Conversion

ADDLDRVR records from PLN\_ADDTL\_PROD\_RATE table will be written to  
ADDL\_DVR\_FEES table in VRS

ECARS TABLE.FieldName	Population Rule	VRS TABLE.FieldName
Xxxx_DFLT.BusinessTypeCode		ADDL_DVR_FEES.ProductTypeCode
Xxxx_DFLT.GroupId	Based upon the GroupId and BranchId, the conversion module will produce an appropriate UserDefinedAreaId (possibly cross-referencing to the PeopleSoft codes) and tie it to an AreaType of ATY_xxxx	ADDL_DVR_FEES.UserDefinedAreaId
Xxxx_DFLT.BranchId		ADDL_DVR_FEES.UserDefinedAreaType
PLN_ADDTL_PROD_RATE.RatePlanSeqNbr		No conversion required
PLN_ADDTL_PROD_RATE.AddlProdCde	This value is retained to determine which table the information need to be written	No conversion required
PLN_ADDTL_PROD_RATE.RateTypeCode	Based on the value of the RateTypeCode, one of the following columns will be populated.	
	If RateTyp = 'DAY'	ADDL_DVR_FEES.FeeUnitCd = 'D'
	If RateTyp = 'RNT'	ADDL_DVR_FEES.FeeUnitCd = 'R'
PLN_ADDTL_PROD_RATE.AddlChrgAmt		ADDL_DVR_FEES.FeeNbr
PLN_ADDTL_PROD_RATE.CntrctOffrInd	Not converted	
PLN_ADDTL_PROD_RATE.InclEnrteInd		
PLN_ADDTL_PROD_RATE.InstructRqmtInd		
PLN_ADDTL_PROD_RATE.MaxAmt	Not converted	
PLN_ADDTL_PROD_RATE.MaxDayNbr		
PLN_ADDTL_PROD_RATE.StrtKeyDte	The date and time will be concatenated and stored in Start Date column in VRS	ADDL_DVR_FEES.StrtDt
PLN_ADDTL_PROD_RATE.StrtKeyTim		
PLN_ADDTL_PROD_RATE.EndDte	The date and time will be concatenated and stored in End Date column in VRS	ADDL_DVR_FEES.EndDt
PLN_ADDTL_PROD_RATE.EndTim		
PLN_ADDTL_PROD_RATE.RecStatInd		Not required for conversion. New Audit values will be populated into Audit related columns.
RecAddDte		
RecAddTim		
RecAddEmpNbr		
RecAdPgmJobNam		
RecChngDte		
RecChngeTim		
RecChngEmpNbr		
RecChgPgmJbNam		

In certain situations, ERAC table information is not sufficient to populate VRS tables completely and some information would have to be filled based on the design guidelines.

VRS Table	Column Name	DataType	VRS Population Rule	Remarks
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ADDL_DVR_FEES	PRT_PROD_TYP_CDE	Varchar2(2)	Set to 'R' – Retail	
	UDA_AREA_ID	Varchar2(20)	Based upon the GroupId and BranchId, the conversion module will produce an appropriate UserDefinedAreaId (possibly cross-referencing to the <i>PeopleSoft</i> codes) and tie it to an AreaType of ATY xxxx	
	UDA_ATY_ARRA_TYP	Varchar2(10)		
	FEE_TYPE_CD	Varchar2(1)	Set to 'S' – Standard for Default Products	
	BEGIN_QTY_NBR	Number(12)	Set to 1	Not available
	END_QTY_NBR	Number(12)	NULL	Not available
	STRT_DT	Date	Value from PLN_ADDTL_PROD_RATE.StrtKeyDte and StrtKeyTim	
	END_DT	Date	Value from PLN_ADDTL_PROD_RATE.StrtKeyDte and StrtKeyTim	
	FEE_NBR	Number(15,3)	Value from PLN_ADDTL_PROD_RATE.AddlChrgAmt	
	RENTAL_MAX_FEE	Number(15,3)	Value from PLN_ADDTL_PROD_RATE.AddlChrgAmt	
	FEE_UNIT_CD	Varchar2(1)	Defaults to "D"	

## 2.7.5 Data Dependencies

USR\_DFND\_AREAS and CONV\_PROD\_XREF tables have been pre-populated

## 2.7.6 Program Modules

A single program module will be created to convert All Additional products from the source table. Arguments can be used to populate a particular type of products. The absence of arguments will convert all products.

The main module for converting Additional Products will be CNVA00001 – This will consists of sub-functions and external calls to common routines (Retrieve, validate, process and write data to the database)

## 2.7.7 Manual Conversion

N/A

## 2.7.8 Assumptions

### Additional Driver Assumptions

1. The Additional Products in VRS will be associated with 'Product Type' (ex. Line of Business – 'R' – Retail, 'I' – Insurance etc.) only.
2. Based on the defaults associated with the rate plan in SI, VRS will populate a corresponding User Defined Area (UDA) and associate the additional products with the UDAs.
3. If any location is populated with a rate type = 'RNT' and that location does not have another record with a rate type 'DAY', the record will be populated with a daily amount and Rental max fee equal to the Per rental amount from SI.
4. If rate type = "RNT" and the *MaxAmt* column on the same record is greater than 0, only the *AddlChrgAmt* amount will be used.

5. If rate type = "DAY" and the *MaxAmt* on the same record is greater than 0 then charge amount will be mapped to *FeeNbr* column and the *MaxAmt* will be mapped to the *RentalMaxFee* column

Underage Assumptions (not being converted)

1. REQ\_AGE and MAX\_AGE values are not available from SI. For conversion purpose, the following values will be populated for the records that have fees associated. REQ\_AGE = 16 and MAX\_AGE = 24
2. Audit Columns will be populated with the Conversion date, time and conversion specific Ids'
3. The Additional Products in VRS will be associated with 'Product Type' only (ex. Line of Business - 'R' - Retail, 'I' - Insurance etc.).
4. Based on the defaults associated with the rate plan in SI, VRS will populate a corresponding User Defined Area (UDA) and associate the additional products with the UDAs.
5. VRS supports the Young Renter Fee (UNDERAGE) at the Car Class level and these are mandatory columns. Since SI do not have any car class information in the PLN\_ADDTL\_PROD\_RATE table, for conversion, 'ACAR' (All Car Classes) will be populated.
6. If any hierarchy is populated with a rate type ='RNT' and that hierarchy do not another record with a rate type 'DAY', the record will be populated with a daily amount and Rental max fee equal to the Per rental amount from SI.
6. If rate type = "RNT" and the *MaxAmt* column on the same record is greater than 0, only the *AddlChrgAmt* amount will be used.
7. If rate type = "DAY" and the *MaxAmt* on the same record is greater than 0 then charge amount will be mapped to *FeeNbr* column and the *MaxAmt* will be mapped to the *RentalMaxFee* column

## 2.7.9 Issues

N/A

### 2.7.10 Data Volumetrics

According to the data received from ERAC during 2<sup>nd</sup> week of June, from Central, Midwest and North Systems.

#### PLN\_ADDTL\_PROD\_RATE

Category	Total	'A'ctive	'D'elele	'I'nactive
# of rows	212	148	60	4
Rows associated with DFLT_RATE_PLAN	85	49	32	4
Rows associated with 'A'ctive 'R'etail Rate Plans	17	5	12	

### 2.7.11 Data Validation Criteria

Data validation will happen through SQL scripts, RatesEngine test harness and investigating the *NotConverted* and log files.

## 2.8 Functional Area: Insurance/Coverages

### 2.8.1 Data Transformation Rules

Coverages are associated with either Rate Plans (Default) or Agree Bill Types (Agreements) in ECARS model. Since the Iteration-2 only deals with Retail rates (Default), the Coverages related to the Default 'R'etail Rate Plans will be converted in iteration 2.

Default Coverage information is stored in two tables:

1. COV\_TYP – a reference table to define Coverage Types and
2. PLAN\_COV\_RATE – stores coverage information related to the Default Rate Plans. There is a relationship with RATE\_PLAN table to associate coverages to the default rate plans. When a rate plan is selected, associated coverages are retrieved using the relationship between the two tables.

#### List of Coverage records in SI:

Coverage Type	Description
DW	Damage Waiver
PAI	Personal Accident Insurance
SLP	Supplemental Liability Protection

COV\_TYP record will be written to INS\_TYPS table and PLAN\_COV\_RATE records will be written to INS\_PRVS table.

### 2.8.2 Data Selection Criteria

Coverages are associated with Rate Plans. For conversion purpose, Rate Plans that have defaults will be retrieved along with coverages for that rate plan. If there are Coverages for that rate plan, then all the default hierarchies associated with the rate plan will be retrieved and the corresponding coverage records will be converted to INS\_PRVS table in VRS.

Retrieval / Conversion Logic:

- Retrieve all active rate plans from DFLT\_RATE\_PLAN (which will read all the retail rate plans that have defaults), which have Additional products using a JOIN between DFLT\_RATE\_PLAN and PLAN\_COV\_RATE tables.

Select criteria is as follows:

- The rows with a *BusinessType* of 'R'etail will be retrieved.
- The rows with a *RecordStatusCode* equal to <null> or 'I'nactive will be retrieved

- Convert each hierarchy to an appropriate VRS User Defined Area (UDA) using CONV\_PROD\_XREF table, which is populated during Rates conversion. (A common function can be written to use across all the conversion modules).
- Perform validations on the retrieved data.
- Prepare the data into a VRS data structure and write to VRS tables.
- Write the exception errors and conversion history to log files for later inspection.
- If multiple rate plans are encountered at a location, then the Rate Plan details will be logged in to an exception file and the coverage records will not be converted.

Two new attributes – COV\_LMT\_AMT and FULL\_COV\_FLG attributes have been added to INS\_PRVS table to support ERAC existing data. These attributes will be populated from COV\_LMT\_AMT and FULL\_COV\_IND attributes of PLAN\_COV\_RATE table.

ECARS TABLE.FieldName	Population Rule	VRS TABLE.FieldName
Xxxx_DFLT.BusinessTypeCode	Based upon the GroupId and BranchId, the conversion module will produce an appropriate UserDefinedAreaId (possibly cross-referencing to the PeopleSoft codes) and tie it to an AreaType of ATY_xxxx	INS_PRVS.ProductTypeCode
Xxxx_DFLT.GroupId		INS_PRVS.UserDefinedAreaId
Xxxx_DFLT.BranchId		INS_PRVS.UserDefinedAreaType
PLAN_COV_RATE.CovTypCde	Based on the Coverage Type code, retrieve COV_INITL_TYP_CDE from COV_TYP table and populate as INT_INS_TYP_ID in VRS table	INS_PRVS.IntlInsTypId
PLAN_COV_RATE.CarClassId		INS_PRVS.VehicleCategoryCode
PLAN_COV_RATE.CarClassSuffixId		INS_PRVS.CarClassSuffixId
PLAN_COV_RATE.RateTypeCode	Based on the value of the RateTypeCode, one of the following columns will be populated.	
PLAN_COV_RATE.CoverageRateAmt		
		INS_PRVS.DailyPrm
		INS_PRVS.WeeklyPrm
		INS_PRVS.MonthlyPrm
	RNT - Not converted	VRS do not support this. Based on the data investigation, 'R'etail conversion doesn't have any impact. But needs resolution moving forward with other iterations.
PLAN_COV_RATE.CovDeductibleAmt		INS_PRVS.EXCS_DPST
PLAN_COV_RATE.CovLmtAmt	The amount will be extracted and stored in Coverage Limit Amount in VRS.	INS_PRVS.CovLmtAmt
PLAN_COV_RATE.FullCovInd	The indicator will be extracted and stored in Full Coverage Flag in VRS.	INS_PRVS.FullCovFlg
PLAN_COV_RATE.CntrctOffrInd	Based on the value of the these columns, one of the following values will be populated.	
PLAN_COV_RATE.IncludeInRate		
PLAN_COV_RATE.RequiredInd		
	If PLAN_COV_RATE.CntrctOffrInd = 'Y'	INS_PRVS.ApplStat = 'D' – Do not offer
	If PLAN_COV_RATE.IncludeInRate = 'Y'	INS_PRVS.ApplStat = 'I' – Included in the rate
	If PLAN_COV_RATE.RequiredInd = 'Y'	INS_PRVS.ApplStat = 'M' – Mandatory
	If all of the above attributes are set to 'N'	INS_PRVS.ApplStat = 'O' – Optional
PLAN_COV_RATE.MaxAmt	Conversion not required.	
PLAN_COV_RATE.MaxDayNbr	Conversion not required.	
PLAN_COV_RATE.StrtKeyDte	The date and time will be concatenated and stored in Start Date column in VRS	INS_PRVS.StrtDt
PLAN_COV_RATE.StrtKeyTim		
PLAN_COV_RATE.EndDte	The date and time will be concatenated and stored in End Date column in VRS	INS_PRVS.EndDt
PLAN_COV_RATE.EndTim		
PLAN_COV_RATE.RecStatCde		Conversion not required
PLAN_COV_RATE.AddDte	Conversion not required.	No audit columns available in INS_PRVS table.
AddTim		
AddEmpNbr		
AddPgmJobNam		
ChngDte		
ChngTim		
ChngEmpNbr		
ChngPgmJobNam		
	INS_TYPS, which is a coverage reference table in VRS need to be populated before Coverages conversion	
COV_TYP.CovInitlTypCde		INS_TYPS.InsTypId
COV_TYP.CovTypDsc		INS_TYPS.InsTypDesc



## 2.8.3 Source and Target Table Impacts

Source Table	Target Table
COV_TYP	INS_TYPS
PLAN_COV_RATE	INS_PRVS

## 2.8.4 Detailed Table / Column Mapping

### Fields retained from ECARS Database

VRS Table	VRS Column	Data Type	VRS Population Rule
INS_PRVS	●PRM_ID	NUMBER(7)	Unique Sequence number will be generated
	●INT_INS_TYP_ID	VARCHAR2(8)	Value from PLAN_COV_RATE.CovTypCde and translated to COV_TYP.COVTYP_INITL_TYP_CDE
	●STRT_DT	DATE	Value from PLAN_COV_RATE.StrtKeyDte and PLAN_COV_RATE.StrtKeyTim
	APPL_STAT	VARCHAR2(1)	Value from one of the PLAN_COV_RATE attributes 'D' - Do not offer if CntrctOffeerInd = 'Y' 'I' - if NcldEnrteInd = 'Y' 'M' - if RegInd = 'Y' 'O' - if all three are set to 'N'
	CCO_CNTRCTL_CND_ID	NUMBER(8)	NULL - for Product related coverages
	CRY_ARIMP_CRY_CD	VARCHAR2(2)	Set to 'US'
	END_DT	DATE	Value from PLAN_COV_RATE.EndDte and PLAN_COV_RATE.EndTim
	EXCS_DPST	NUMBER(15,3)	Value from PLAN_COV_RATE.CovDctblAmt
	PRI_PROD_INST_CD	VARCHAR2(8)	NULL
	PRI_VER_NBR	NUMBER(3)	NULL
	RES_END_DT	DATE	NULL - not used
	RES_STRT_DT	DATE	NULL - not used
	UDA_AREA_ID	VARCHAR2(8)	Derived UDA and UDA Type from the Default
	UDA_ATY_AREA_TYP	VARCHAR2(10)	
	VCA_CAT_CD	VARCHAR2(8)	Value from PLAN_COV_RATE.CarClsId
	CAR_CLS_SUFIX_ID	VARCHAR2(4)	Value from PLAN_COV_RATE.CarClsSufixId
	INS_UNBLD_DLY_AMT	NUMBER(15,3)	NULL - not used
	IP_PROD_CAT_CD	VARCHAR2(1)	NULL - not used
	PRT_PROD_TYP_CD	VARCHAR2(2)	Set to 'R' (Refers to 'R'etail in PROD_TYPS table)
	DLY_PREM	NUMBER(15,3)	Value from PLAN_COV_RATE.RateTypCde and PLAN_COV_RATE.CovRateAMt If RateTypCde = 'DAY', then CovRateAmt is populated in this column
	WKLY_PREM	NUMBER(15,3)	Value from PLAN_COV_RATE.RateTypCde and PLAN_COV_RATE.CovRateAMt If RateTypCde = 'WK', then CovRateAmt is populated in this column
	MTHLY_PREM	NUMBER(15,3)	Value from PLAN_COV_RATE.RateTypCde and PLAN_COV_RATE.CovRateAMt If RateTypCde = 'MTH', then CovRateAmt is populated in this column
	COV_LMT_AMT	NUMBER(15,3)	Value from PLAN_COV_RATE.CovLmtAmt
	FULL_COV_FLG	VARCHAR2(1)	Value from PLAN_COV_RATE.FullCovInd

### VRS Population Rules

In certain situations, ERAC table information is not sufficient to populate VRS tables completely and some information would have to be filled based on the design guidelines.

<i>VRS Table</i>	<i>VRS Column</i>	<i>Data Type</i>	<i>VRS Population Rule</i>
INS_TYPS	•CRY_ARIMP_CRY_CD	Varchar2(2)	Use 'US' country code
	•INS_TYP_ID	Varchar2(8)	Value from COV_TYP.IniTypCde
	•INS_TYP_DESC	Varchar2(75)	Value from COV_TYP.CovTypDsc
	•RCT_CHG_TYP	Varchar2(5)	Derived from RRA_CHG_TYPS table DW - 00006 PAI - 00007 SLP - 00032
	CREATE_USER_ID	Varchar2(30)	Set to 'CONV-COVERAGE'
	CREATE_DT	Date	Conversion Date and Time
	LAST_UPDT_USER_ID	Varchar2(30)	NULL
	LAST_UPDT_DT	Date	NULL
	•INS_CND_LN1	Varchar2(75)	Value from COV_TYP.CovTypDsc
	ASSOC	Varchar2(1)	NULL - Not used for ECARS
	INS_CND_LN2	Varchar2(75)	NULL - Not used for ECARS
	•INS_SUPER_TYP_CD	Varchar2(3)	Value from COV_TYP.IniTypCde
	INS_SUPER_TYP_ORD_NBR	Number(2)	NULL - Not used for ECARS
	PKG_ID	Number(6)	NULL - Not used for ECARS
	EC_INS_ATTACH_FLG	Varchar2(10)	NULL - Not used for ECARS

### 2.8.5 Data Dependencies

- INS\_TYPS table has been pre-populated.
- PROD\_TYPS table has been pre-populated

### 2.8.6 Manual Conversion

Since there are only few rows in COV\_TYP table, a SQL script will be used to populate rows in INS\_TYPS table.

INS\_TYPS will be created as shown:

INS_TYP_ID	INS_TYP_DESC	CRY_ARIMP_CR Y CD	INS_SUPER_TYP_CD	INS_CND_LNI	CREATE_USER_ID	CREATE_DT
DW	Damage Waiver	US	DW	Damage Waiver	CONVERSION	System Date
PAI	Personal Accident Insurance	US	PAI	Personal Accident Insurance	CONVERSION	
SLP	Supplemental Liability Protection	US	SLP	Supplemental Liability Protection	CONVERSION	

### 2.8.7 Assumptions

1. If a rate plan doesn't have defaults defined, the coverages associated with that rate plan will not be converted.
2. Coverages within the VRS model are going to be maintained at the hierarchical levels.
3. If multiple rate plans are encountered at a location, they will be converted as coverages associated with multiple product instances determined by Rates Conversion process
4. If the rate plans are being shared among the hierarchies, related coverages will not support this feature anymore after conversion.
5. Any records that have Rate Type set to 'RNT' will not be converted and written to an exception file.
6. The three indicators – 'PLAN\_COV\_RATE.CntrctOffrInd', 'PLAN\_COV\_RATE.IncludeInRate' and 'PLAN\_COV\_RATE.RequiredInd' are mutually exclusive. If any records are encountered that have more than one indicator set to 'y', they will be written to exception file and will not be converted.
7. If multiple rate plans are encountered at a location, then the Rate Plan details will be logged in to an exception file and the coverage records will not be converted.

### 2.8.8 Issues

### 2.8.9 Data Volumetrics

PLAN\_COV\_RATE

Category	Total	'A'ctive	'D'elele
# of rows	2084	1616	468
Rows associated with DFLT_RATE_PLAN	514	235	279
Rows associated with 'A'ctive 'R'etail Default Rate Plans	68	51	17

### 2.8.10 Data Validation Criteria

Data validation will happen through SQL scripts, RatesEngine test harness and investigating the *NotConverted* and log files.

## 2.9 Functional Area: General Conditions

### 2.9.1 Data Transformation Rules

One general condition, or message, will be created for each Business Type Code and Default Number combination that exists in the default table. For this iteration, the retail (R) message type will be the primary focus.

General Conditions are associated with default messages used for display purposes in ECARS model. The ECARS conversion retrieval will be made of a number of logical retrieval processes. This logical approach will enable us to schedule certain levels of conversion/retrieval from ECARS and population of the VRS tables, in order to have a faster and more customizable environment.

The General Condition conversion program will cross-reference information from the Conversion Temp table which is populated by the Rate Conversion program, tying the Product Instance and UDA to the Rate Plan.

### 2.9.2 Data Selection Criteria

Default General Conditions information is stored in four tables – 1. DFLT – stores the default message number by business type and has some default message descriptions for vehicle and fuel for the Default Rate Plan, 2.

DFLT\_MISC\_VERB – stores additional message information with a valid date range, 3. DFLT\_RULE – stores messages and values for rules with a valid date range, 4. RULE – stores rule information related to specified rule code. The DFLT table has a relationship associated with the DFLT\_MISC\_VERB and DFLT\_RULE table. Associated messages are retrieved using the relationship of the default number and business type code from the DFLT table. The RULE table has a relationship associated with the DFLT\_RULE table. The associated messages are retrieved using the relationship of rule code from the RULE table.

### 2.9.3 Source and Target Table Impacts

Source Tables	Target Tables
DFLT DFLT_MISC_VERB DFLT_RULE RULE	RNT_CNDS GEN_CNDS

## 2.9.4 Detailed Table / Column Mapping

### Ecars Retrieval

#### *DFLT*

The entry table will be the DFLT table. This allows us to retrieve all the default message numbers and other appropriate information from the ECARS tables.

The selection criteria is as follow:

- The rows marked with a *BusinessType* of 'R'etail will be retrieved.
- The rows with a *RecordStatusCode* equal to <null> or 'I'nactive will be retrieved

The fields *StartDate* and *EndDate* will be retained for examination/usage at a later stage. The fields *BusinessType* and *DefaultNumber* will be retained and used to retrieve the corresponding data from the DFLT\_RULE, and DFLT\_MISC\_VERB tables. The UDA derived from the Conversion Temp table will need to be retained for usage at a later stage

#### *DFLT\_MISC\_VERB*

Using the *BusinessType* and *DefaultNumber* all appropriate rows will be retrieved from the DFLT\_MISC\_VERB table.

Further selection criteria are also applied:

- The rows marked with a *BusinessType* of 'R'etail will be retrieved.
- The rows with a *RecordStatusCode* equal to <null> or 'I'nactive will be retrieved

The fields *BusinessType* and *DefaultNumber* will be retained and used to retrieve other corresponding data.

#### *DFLT\_RULE*

Using the *BusinessType* and *DefaultNumber* all appropriate rows will be retrieved from the DFLT\_RULE table.

Further selection criteria are also applied:

- The rows marked with a *BusinessType* of 'R'etail will be retrieved.
- The rows with a *RecordStatusCode* equal to <null> or 'I'nactive will be retrieved

The field *RuleCode* will be retained and used to retrieve the corresponding data from the RULE table. The fields *ValueId*, *StartKeyDate*, *StartKeyTime*, *EndDate* and *EndTime* will be retained for examination/usage at a later stage. The fields *BusinessType* and *DefaultNumber* will be retained and used to retrieve other corresponding data.

#### *RULE*

- Select all appropriate rows from the RULE table.

- The rows with a *RecordStatusCode* equal to <null> or 'Inactive' will be retrieved

The RuleCde will be retained along with the unique id created when the general conditions tables is populate. This combination will be used to map the correct info message and value id from the default rule table.

### Fields Retained for VRS Population

<i>ECARS TABLE.FieldName</i>	<i>Population Rule</i>	<i>VRS TABLE.FieldName</i>
xxxx_DFLT.GroupId	Based upon the GroupId and BranchId, the conversion module will produce an appropriate UserDefinedAreaId (possibly cross-referencing to the PeopleSoft codes) and tie it to an AreaType of ATY xxxx	RNT_CNDS.UserDefinedAreaId RNT_CNDS.UserDefinedAreaType
DFLT.StartDate	The start date will be the lesser of the start dates from the DFLT or DFLT_RULE table	RNT_CNDS.StartDate
DFLT.EndDate	The end date will be the greater of the end dates from the DFLT or DFLT_RULE table	RNT_CNDS.EndDate
DFLT.LOC_DSC	Not converted	
DFLT.DFLT_CAR_PREF_DSC	Not converted	
DFLT.DFLT_FUEL_ONE_DSC	Not converted	
DFLT.DFLT_FUEL_TWO_DSC	Not converted	
DFLT. BUS_TYP_CDE DFLT_NBR REC_STAT_CDE DFLT_MISC_VERB BUS_TYP_CDE DFLT_NBR REC_STAT_CDE DFLT_RULE BUS_TYP_CDE RULE_CDE DFLT_NBR REC_STAT_CDE RULE REC_STAT_CDE	These values are retained for retrieval of additional messages or rules	No conversion required
DFLT. ADD_DTE ADD_TIM ADD_EMP_NBR ADD_PGM_JOB_NAM CHNG_DTE CHNG_TIM CHNG_EMP_NBR CHNG_PGM_JOB_NAM	Not converted	
	same as RNT_CNDS.GCD_CND_ID	GEN_CNDS.CND_ID
DFLT_MISC_VERB.VERB_TXT		GEN_CNDS.CND_LNI
DFLT_RULE.INFOMSG_TXT		RNT_CNDS.CMT_LNI
DFLT_MISC_VERB VERB_TYP_ID VERB_NBR ADD_DTE ADD_TIM ADD_EMP_NBR ADD_PGM_JOB_NAM CHNG_DTE CHNG_TIM CHNG_EMP_NBR CHNG_PGM_JOB_NAM	Not converted	
DFLT_RULE ADD_DTE	Not converted	

ADD_TIM ADD_EMP_NBR ADD_PGM_JOB_NAM CHNG_DTE CHNG_TIM		
DFLT_RULE.VAL_ID		RNT_CNDS.CMT_LN2
RULE.FLD_DSC		GEN_CNDS.LN1
RULE.INFO_MSG_TXT		GEN_CNDS.LN2
RULE.RULE_CDE	Must be retained with the GEN_CNDS.CND_ID	
RULE FLD_NAM MIN_MAX_IND RULE_OWNER_ID RQMT_ID VAL_CDE ADD_DTE ADD_TIM ADD_EMP_NBR ADD_PGM_JOB_NAM CHNG_DTE CHNG_TIM CHNG_EMP_NBR CHNG_PGM_JOB_NAM	Not converted	

### VRS Population Rules

In certain situations, ERAC table information is not sufficient to populate VRS tables completely and some information would have to be filled based on the design guidelines.

For every *BusinessTypeCode* and *DefaultNumber* combination in the DFLT table joined with the DFLT\_MISC\_VERB table, there will be a row created in the VRS GEN\_CNDS and will be attached to RNT\_CNDS table. For multiple rows retrieved with the same *DefaultNumber*, the *VERB\_TXT* will be added to the next available line in the GEN\_CNDS table *CND\_LN*. The RULE table and the DFLT\_RULE table will be converted as described below.

The Product Code in RNT\_CNDS table will be populated from the reference table of Rate plan/Product Code generated by the rates conversion process.

The basic rules for conversion of the RULE codes are:

- The general conditions table must be populated first from the rules table before the information from the DFLT\_RULE table can be retrieved.
- An entry in the general conditions table will be created for every active row in the rule table.
- The unique ID created from the insert above must be retained with the appropriate rule code to map the rule code in the default rule table back to the correct general condition row referenced when attaching it to the rental conditions created. Val\_id and info message values from DFLT\_RULE table will be populated into the RNT\_CNDS table.
- For every row in the DFLT\_RULE and hierarchy table combination, a row in the RNT\_CNDS will be created using the rule code and the unique general conditions id retained above to link them.



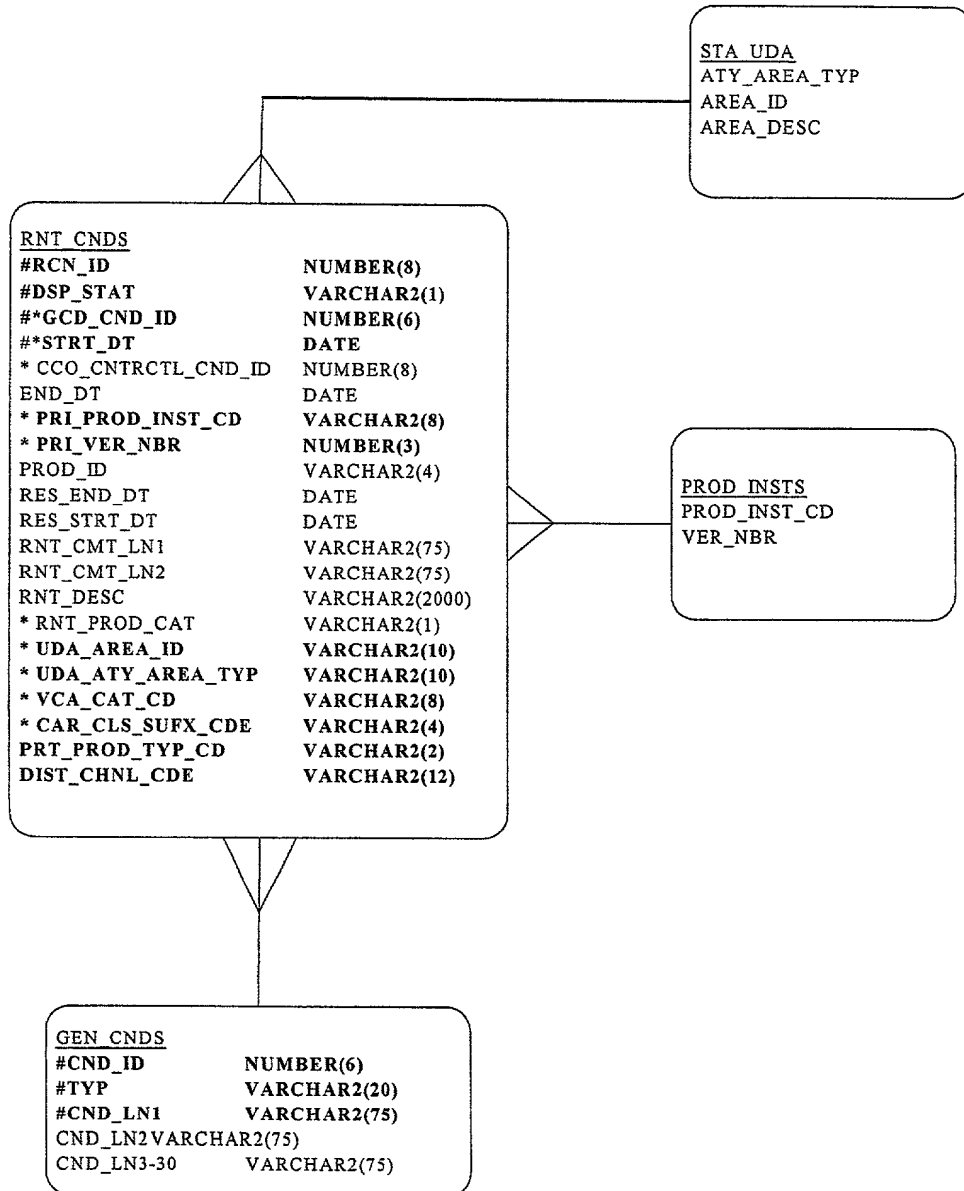
A new attribute DIST\_CHNL\_CDE has been added to the RNT\_CNDS table and this attribute will be populated with a default value of **'Branch'** while converting SI data. Appropriate code changes will be made to incorporate this change.

VRS Table	VRS Column	Data Type	VRS Population Rule
RNT_CNDS	UserDefinedAreaId	Varchar2(8)	Based on level GrpId
	UserDefinedAreaType	Varchar2(10)	Set to 'ATY_xx'
	RCI_ID	Number(8)	Unique Sequence Number will be generated
	DSP_STAT	Varchar2(8)	Default to 'D'
	GCD_CND_ID	Number(6)	Value from GEN_CNDS.CND_ID
	STRT_DT	Date	Lesser of values from DFLT.STRT_DTE And DFLT_RULE.STRT_KEY_TIM    DFLT_RULE.STRT_DTE
	END_DT	Date	Greater of values from DFLT.END_DTE And DFLT_RULE.END_KEY_TIM    DFLT_RULE.END_DTE or NULL
	CCO_CNTRCTL_CND_ID	Number(8)	NULL - Not used for ECARS
	PRI_PROD_INST_CD	Varchar2(8)	Determined by the Rate Conversion process
	PRI_VER_NBR	Number(3)	Default to '1'
	PROD_ID	Varchar2(4)	NULL - Not used for ECARS
	RES_END_DT	Date	NULL - Not used for ECARS
	RES_START_DT	Date	NULL - Not used for ECARS
	RNT_CMT_LN1	Varchar2(75)	DFLT_RULE.INFO_MSG_TXT from DFLT_RULE table or DFLT_MISC_VERB_TXT from .DFLT_MISC_VERB table or DFLT_RULE.VAL_ID if DFLT_RULE.INFO_MSG_TXT is null
	RNT_CMT_LN2	Varchar2(75)	DFLT_RULE.VAL_ID
	RNT_DESC	Varchar2(2000)	NULL - Not used for ECARS
	RNT_PROD_CAT	Varchar2(1)	NULL - Not used for ECARS
	VehicleCategoryCode	Varchar2(8)	Default Vehicle Code (ACAR)
	VehicleCategoryCodeSuffix	Varchar2(4)	Default Vehicle Suffix (**)
	<b>DIST_CHNL_CDE</b>	<b>VARCHAR2(12)</b>	<b>Default to 'BRANCH' for SI data conversion</b>

VRS Table	VRS Column	Data Type	VRS Population Rule
GEN_CNDS	CND_ID	NUMBER(6)	Unique Sequence number will be generated
	TYP	VARCHAR2(20)	Default to "Retail"
	CND_LN1	VARCHAR2(75)	DFLT_MISC_VERB.VERB_TXT
	CND_LN1	VARCHAR2(75)	RULE.FLD_DSC
	CND_LN2	VARCHAR2(75)	RULE.INFO_MSG_TXT
	CND_LN3-30	VARCHAR2(75)	

## 2.9.5 Data Dependencies

### VRS Data Model



## 2.9.6 Manual Conversion

N/A

## 2.9.7 Assumptions

1. Car Class ID and Car Class Suffix ID are going to be of lengths 8 and 4 respectively.

2. Vehicle Category Code (ACAR) and Suffix (\*\*) will be used for all Retail messages.
3. We do not need to map the LOC\_DSC field from the DFLT table.
4. If the field targeted to populate the GEN\_CNDS.CND\_LN1 is null, then the field targeted to populate the GEN\_CNDS.CND\_LN2 will be used to populate CND\_LN1. This is true for RNT\_CNDS comment lines 1 and 2 also.
5. The data in the DFLT\_RULE.val\_id will be corrected by Data management group before the conversion program runs.
6. Each message will be converted as is.

## 2.9.8 Issues

## 2.9.9 Data Volumetrics

The table below represents some volume metrics from the ECARS database. These are based upon a database refresh received by PSC on June 11, which represents three of the eighteen ECARS machines. Since the Iteration 2 only deals with Retail rates (Default), only these General Conditions will be converted.

<i>Ecars Table</i>	<i>Num Rows</i>	<i>Num Rows Active</i>	<i>Num Rows Delete</i>	<i>Num Rows Inactive</i>
DFLT	161	53	79	29
DFLT_MISC_VERB	401	187	214	-
DFLT_RULE	100	78	22	-
RULE	20	-	-	-

For each logical level retrieved, as explained in the rate conversion section, the *BusinessType* and *DefaultNumber* obtained will be used to select the appropriate rows from the DFLT\_MISC\_VERB and DFLT\_RULE tables. The following section describes, the retrieval from the ECARS tables based on the *BusinessType* and *DefaultNumber*, which fields are retained and how and where this information will be populated in the VRS tables.

## 2.9.10 Data Validation Criteria

Data validation will happen through SQL scripts, RatesEngine test harness and investigating the *NotConverted* and log files.

## 2.10 Data Bridges – Conversion and On-going Maintenance

### 2.10.1 UDA Hierarchy

#### 2.10.1.4 Characteristic Information

Enterprise branch data is currently maintained on the OFC\_DIR\_BR and OFC\_WW\_DIR tables. The VRS application uses the STNS, USR\_DFND\_AREAS and AREA\_TYPS tables to maintain branch and corresponding rate hierarchy data. For Enterprise VRS implementation, it is assumed that the branch data will continue to be maintained in the OFC\_DIR\_BR and OFC\_WW\_DIR tables. There will be a one-time conversion of existing Enterprise branch data to corresponding VRS entities. In addition, there will be ongoing data bridging activity to ensure branch and station data synchronization.

<b>Goal In Context:</b>	ERAC user maintains the Branch information in the ECARS Branch tables. This information is mapped to VRS Stations, User Defined Areas and other related entities. This happens during the conversion and as a part of on-going data maintenance activity.
<b>Scope:</b>	This Use Case deals with Insert/Update activity on the Branch tables as a main actor. This use case does not cover the scenarios for maintaining the VRS stations, user defined areas and related entities directly. This use case will take effect due to create or update activity on the OFC_DIR_BR table.
<b>Level:</b>	Sub Functionality
<b>Pre-Condition:</b>	<ul style="list-style-type: none"><li>a. AREA_TYPS entity pre-populated with all the relevant area types.</li><li>b. Country X-reference entity pre-populated with ERAC 3 char country code and VRS 2 char country codes.</li><li>c. LRD_IORGS table populated with all legacy keys to Peoplesoft cross reference values</li></ul>
<b>Success End Condition:</b>	Stations record created with appropriate referential integrity for all the related entities namely USR_DFND_AREAS, STA_UDA.
<b>Failed End Condition:</b>	Stations (STNS), Station-UDA (STA_UDA) or User Defined Areas (USR_DFND_AREAS) records could not be created successfully.
<b>Primary Actor:</b>	User responsible for maintaining Branch data. User creating or updating a branch record has been shown as a primary actor here, but from architecture perspective, the event of that transaction being reflected into OFC_DIR_BR table will execute this use case in the form of action.
<b>Trigger Event:</b>	New Branch is created or Branch data related to area-hierarchy attributes has been updated or Branch has been closed.

## 2.10.1.5 Main Success Scenarios

### 2.10.1.5.1 User Creates Branch

**Step 1** - User Creates the Branch record in the OFC\_DIR\_BR and OFC\_WW\_DIR tables.

#### OFC\_DIR\_BR Table

Column Description	Column Name	Data Type	Value
Group ID	Grp_Id	Varchar2(4)	12
Branch ID	Br_Id	Varchar2(4)	1241
State Code	Mail_St_Cde	Varchar2(4)	CO
Area ID	Area_Id	Varchar2(6)	12U
Region ID	Regn_Id	Varchar2(2)	129
Country Code	Cntry_Iso_Cde	Varchar2(6)	USA
Zip Code	Mail_Zip_Cde	Varchar2(18)	80223
Phone Area Code	Ofc_Phn_Areacde	Number(3)	303
Phone Number Exch	Ofc_Phn_Xchng_Nbr	Number(3)	722
Phone Last Four	Ofc_Phn_Nbr	Number(4)	9999
Long Address Name	Long_Ad_Name	Varchar2(60)	Special Sales Denver
Branch Add Date	Br_Add_Dte	Date	5/4/2001

#### OFC\_WW\_DIR Table

Column Description	Column Name	Data Type	Value
Group ID	Grp_Id	Varchar2(4)	12
Branch ID	Br_Id	Varchar2(4)	1241
Country Code	Cntry_Iso_Cde	Varchar2(6)	USA
Sub-Region ID	Sub_Regn_Id	Varchar2(4)	12CO
City ID	City_Id	Varchar2(4)	----

**\*The record is retrieved by conducting a join on the OFC\_DIR\_BR and OFC\_WW\_DIR tables.**

### Step 2 - Peoplesoft Cross Reference Values retrieved

Once the branch data is selected from these two tables, the LRD\_IORG table is queried using the legacy codes and type descriptions (branch, region, group, area, city, sub-region) to retrieve the corresponding Peoplesoft values. The following depicts a call to the LRD\_IORG table:

*Select PS\_ORG\_ID, PS\_ORG\_DSC from  
LRD\_IORG*

Where

*IORG\_TYP\_DSC = Legacy Type (branch, region, group, area, city, sub-region)*

And

*LGCY\_IORG\_ID = Legacy Key (for example: '0109', '01A')*

### Step 3 - Create Station Record

Station record will be created with:

Station Id: '1001036' \* Peoplesoft Value retrieved from the LRD\_IORG Table

Country Code: 'US' \* Will use CountryXreference Table.

Station name: 'Special Sales Denver'

Create Date '04 MAY 2001'

### Step 4 - Create STA\_UDA record showing the area-id and area types for the station.

This step will create references for this station with all the defined levels of hierarchy. If a level of the hierarchy is not defined for a branch then an insert will not be made for the record. Note that Peoplesoft key values are used instead of the legacy key values. For levels of the hierarchy that do not have corresponding peoplesoft values i.e. area code, exchange, zipcode, high zip, the legacy key values are used. As it currently exists, only six levels of the hierarchy have corresponding peoplesoft values, group, region, sub-region, city, area and branch.

Stn_Id	Area_Id	Area_Type	Eff_Start Dt	Eff_End Dt
1001036	US	ATY_CTRY	Create date on OFC_DIR_BR table	
1001036	A0012	ATY_GRP	Create date on OFC_DIR_BR table	
1001036	RGN_COL_99	ATY_RGN	Create date on OFC_DIR_BR table	
1001036	Missing	ATY_SUBRGN	Create date on OFC_DIR_BR table	
1001036	CO	ATY_ST	Create date on OFC_DIR_BR table	
1001036	AR_COL_012	ATY_AREA	Create date on OFC_DIR_BR table	
1001036	US802	ATY_HZIP	Create date on OFC_DIR_BR table	
1001036	US80223	ATY_ZIP	Create date on OFC_DIR_BR table	

Stn_Id	Area_Id	Area_Type	Eff_Start_Dt	Eff_End_Dt
1001036	US303	ATY_PHN_AR	Create date on OFC_DIR_BR table	
1001036	US303722	ATY_XCHNG	Create date on OFC_DIR_BR table	
1001036	101036	ATY_BR	Create date on OFC_DIR_BR table	

**\*For this record, the branch was not associated with a City hierarchy so no entry was made.**

#### 2.10.1.5.2 User Updates Branch

If any of the area hierarchy related information in OFC\_DIR\_BR table is modified, corresponding updates need to be reflected on VRS\_STA\_UDA and USR\_DFND\_AREAS table. For the area record that has been modified the sequence of events will be as follows.

##### Step 1 - Update STA\_UDA

The current relationship mapping a branch to the specific area type will be in-activated by updating the effective end date on that record. The new record mapping the branch to the new area and Area\_Type will be created as in 2.1.3 (Step 3) of the use case above. If the area with that type does not exist, the new Area\_Id will be created.

#### 2.10.1.5.3 User Inactivates a Branch

All records in the STA\_UDA table will be end-dated with the Eff\_End\_Date as current transaction or system date.

#### 2.10.1.6 Scenario Extensions

##### 2.10.1.6.1 User Defined Area does not Exist

While creating the area references for the newly created station id, the user defined area does not exist then the corresponding USR\_DFND\_AREAS record will be created before creating the STA\_UDA record.

#### 2.10.1.7 Scenario Variations

##### 2.10.1.7.1 Region ID not Defined at the Time of Creating a Branch Record

If the region id is not populated then the reference to area type 'REGION' will not be created. In addition any other area type which is using REGION ID as a prefix for uniqueness will not be created.

## 2.10.1.8 Related Information

### 2.10.1.8.1 Area Types and Level Of Hierarchy

The values used for the AREA\_TYPS table are described here. New attribute called Hierarchy will be defined. It will be optional attribute for AREA\_TYPS table.

Description	Column Value	Hierarchy Level
Company	ATY_CMPY	13
Country	ATY_CTRY	12
Group	ATY_GRP	11
Region	ATY_RGN	10
Sub-Region	ATY_SUBRGN	9
State	ATY_ST	8
City	ATY_CITY	7
Area	ATY_AREA	6
High 3 ZIP	ATY_HZIP	5
ZIP	ATY_ZIP	4
Area Code	ATY_PHN_AR	3
Area-Exchange	ATY_XCHNG	2
Branch	ATY_BR	1



### 3 Key Risks, Assumptions, Issues, Dependencies

#### 3.1 Risks

##### 3.1.1 Products and Rates

- Current analysis and design is based upon the data extracts from three of the eighteen ECARS machines. Any significant variations of this data could have an impact on the overall design

##### 3.1.2 Data Bridges / UDA Hierarchy

- There are no open risks at this time

#### 3.2 Assumptions

##### 3.2.1 Products and Rates

- Orphan rate plans will not be converted
- Multiple active rate plans can exist at a given location at the hierarchy level.
- ERAC is responsible for the resolution of discrepancies related to conversion of data from AS/400 to ECARS SI Oracle database.
- Records in PLAN\_DISC\_RATE table will not be converted for iteration 2. Applicability of discounts will be addressed as a part of iteration 3.
- DFLT numbers will be unique within the database.
- For all conversion areas the data related to the rows indicated as 'D'eleted will not be converted, i.e. only rows with a *RecordStatusCode* of <null> and 'I'nactive will be brought over to the VRS database.

### 3.2.2 Data Bridges / UDA Hierarchy

- An Enterprise region is uniquely identified by composite key of Group id + Region id.
- An Enterprise area is uniquely identified by the composite key of Group id + Region id + Area id. In the existing Enterprise data model, an Area ID is comprised of a prefix of a two-character group ID and a suffix of a one-character area ID such that an area ID of 991 identifies a group ID of 99 and an area ID of 1. For VRS purposes, only the third character of an Enterprise Area ID on the OFC\_DIR\_BR table will be used to identify the area. The resulting area ID stored on the VRS\_STA\_UDA table would be 9931 which represents a group of 99 ID, a region of 3 ID and an area ID of 1.
- An Enterprise branch id is uniquely identified by the composite key of Group id + Branch id.
- Branch unique identifier on ERAC system ie. Peoplesoft key and VRS Stn\_Id will use the same value so that no separate x-reference table/attribute needs to be maintained.
- Branch data structure and area hierarchy structure (area types and hierarchy levels) do not vary based on the country.
- When creating an entry into the STA\_UDA table for an area type of ZIP, only the first five digits of the zip code will be used. The data contained in the Mail\_Zip\_Cde column on the OFC\_DIR\_BR table will be used to determine the ZIP for a branch.
- All records on the OFC\_DIR\_BR and OFC\_WW\_DIR tables will be converted. If certain branches (admin, etc) are not to be converted, we need a way to identify these records.

### 3.3 Issues

#### 3.3.1 Products and Rates

- There is no easy way to identify 1 year's worth of history as dates do not exist in all the ECARS tables - Resolution: Convert all the history.
- Any active or deleted rates converted to VRS will be considered expired and will not be retrieved by the engines. These will be converted purely from a historical perspective. This can cause potential discrepancies between the rates retrieved by ECARS legacy and ECARS 2.0 systems

- ST\_DFLT and ZIP\_DFLT tables do not have group id to satisfy the linkage to DFLT\_RATE PLAN table. In these cases, the group id will be ignored and only one applicable rate plan record will be retrieved for that DFLT number.
- Do we need to convert CovLimit Amt and FullCovInd fields from PLAN\_COV\_RATE table. There are currently no corresponding fields in VRS data model.

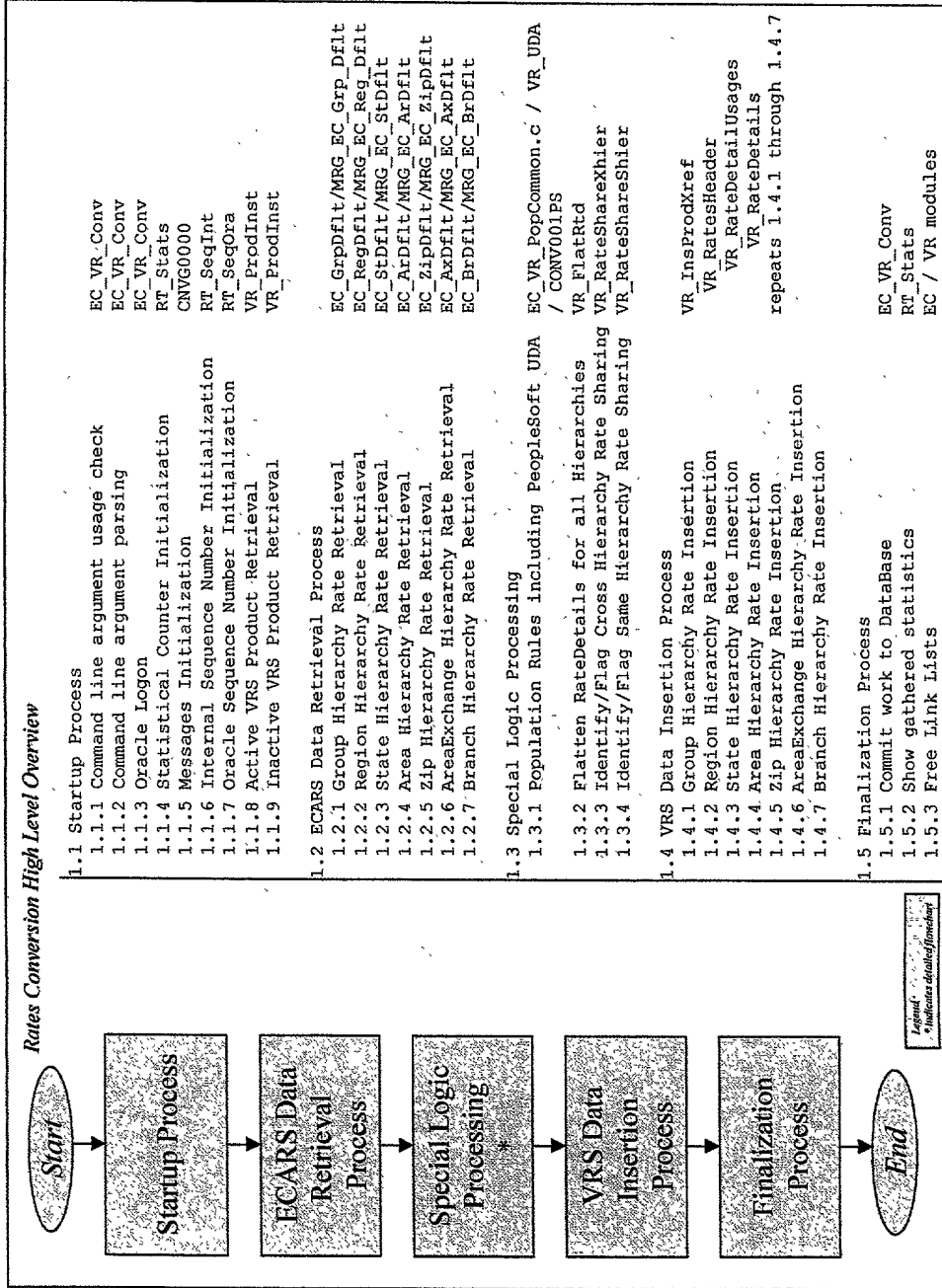
### 3.3.2 Data Bridges / UDA Hierarchy

- We have a need to create or indicate an UM LOCATION. We need to specify the attribute which will be used and how this area will be positioned in area hierarchy
- It is assumed that these transactions will be triggered using Database triggers defined on OFC\_DIR\_BR table. We need to discuss if this is an acceptable design option from overall architecture point of view
- The impact of close branch transaction on remaining data set up needs to be evaluated. Eg. Any station-branch level rates defined may need to be inactivated
- We need to discuss the options and constraints necessary to define and maintain area id covering requirements related to New York Burroughs area
- How do we implement the High 3 zip code, zip code, phone area code, and phone area code and exchange for non-US countries?
- There are numerous Legacy Codes that do not currently have corresponding peoplesoft values of the LRD\_IORG table. In addition, there are numerous entries that do not have unique peoplesoft values. These deficiencies need to be addressed before successful conversion can take place.

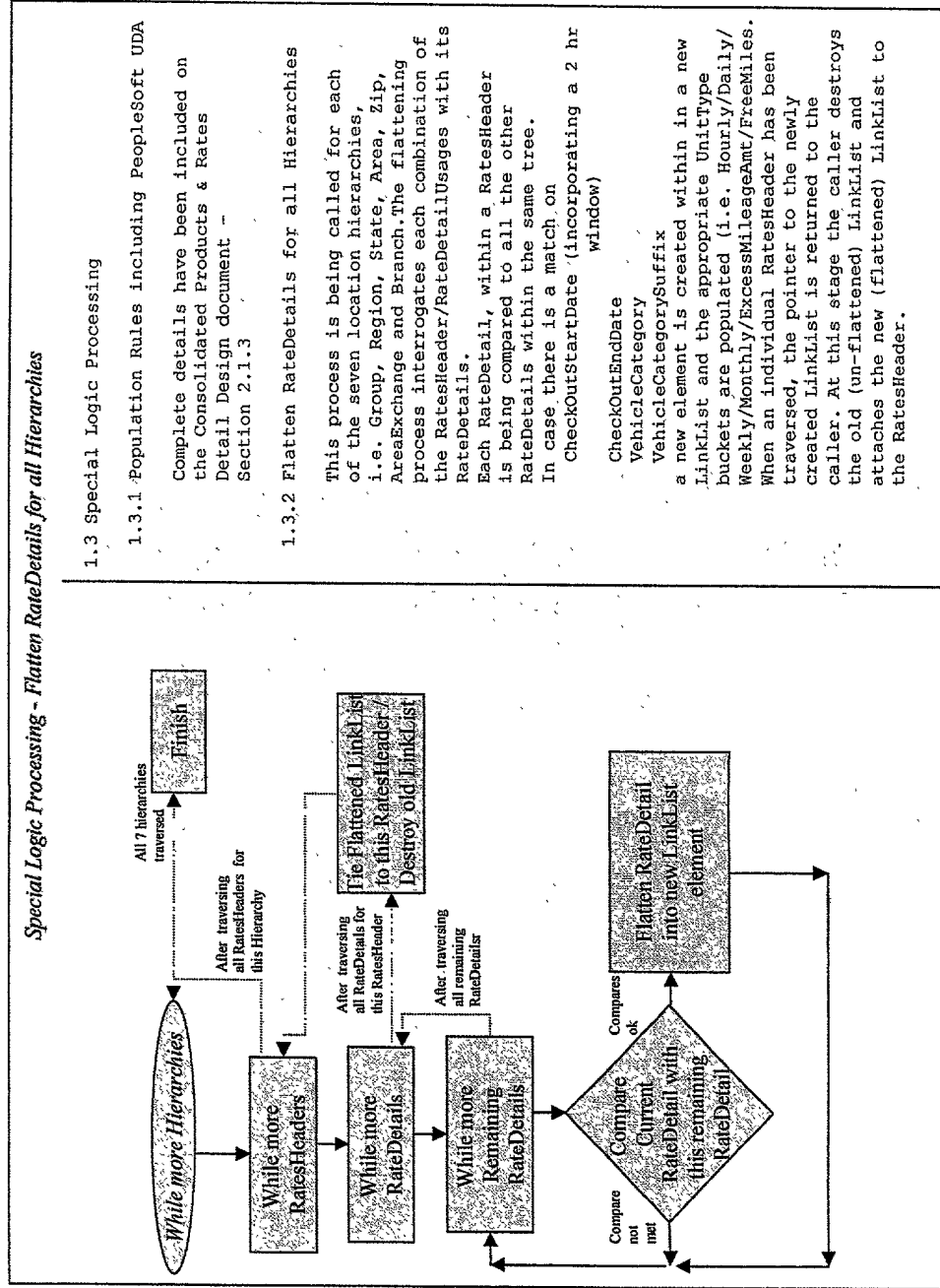
## 4 Appendices

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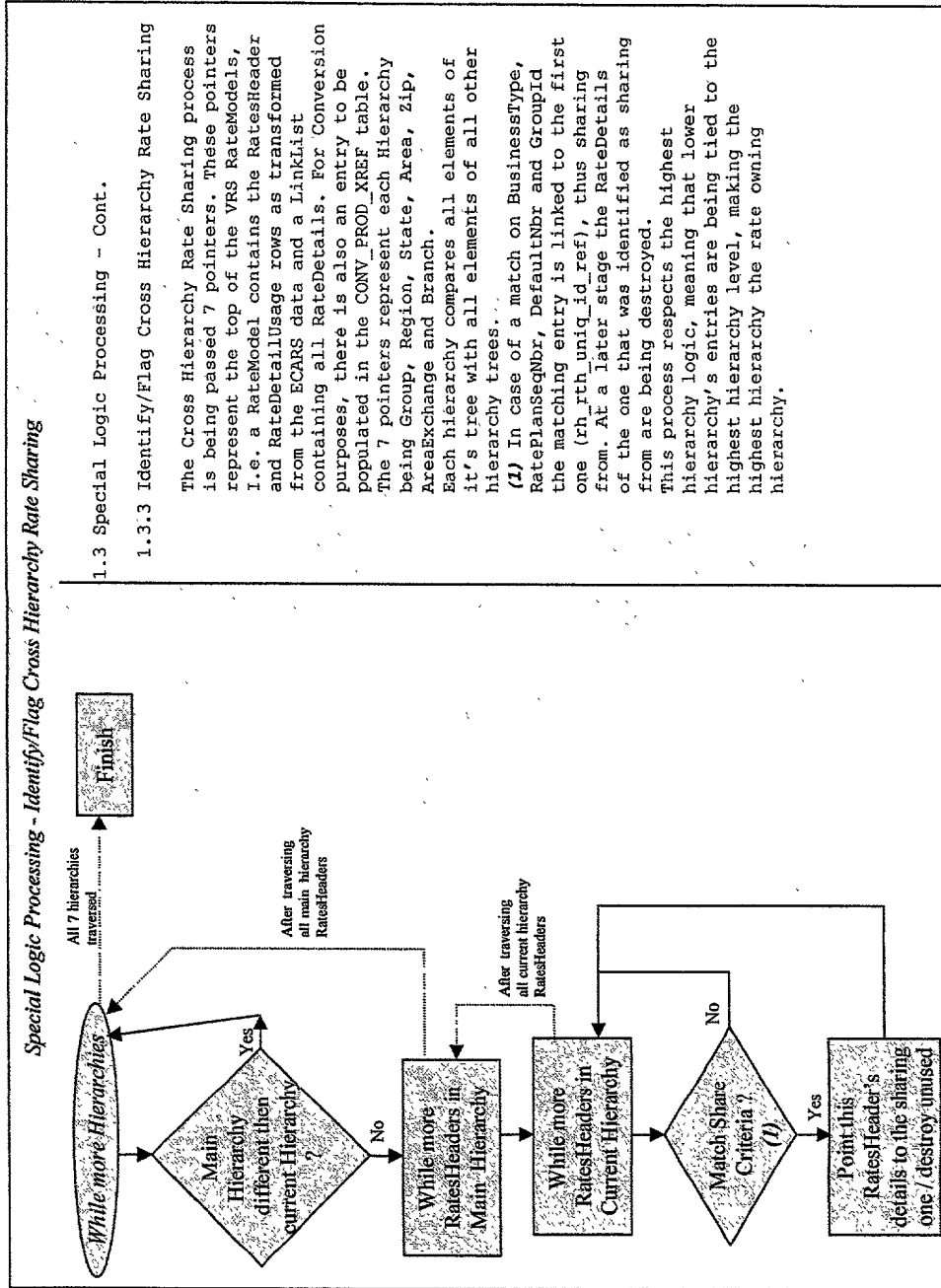
## 4.1 Rates Conversion – High Level Overview



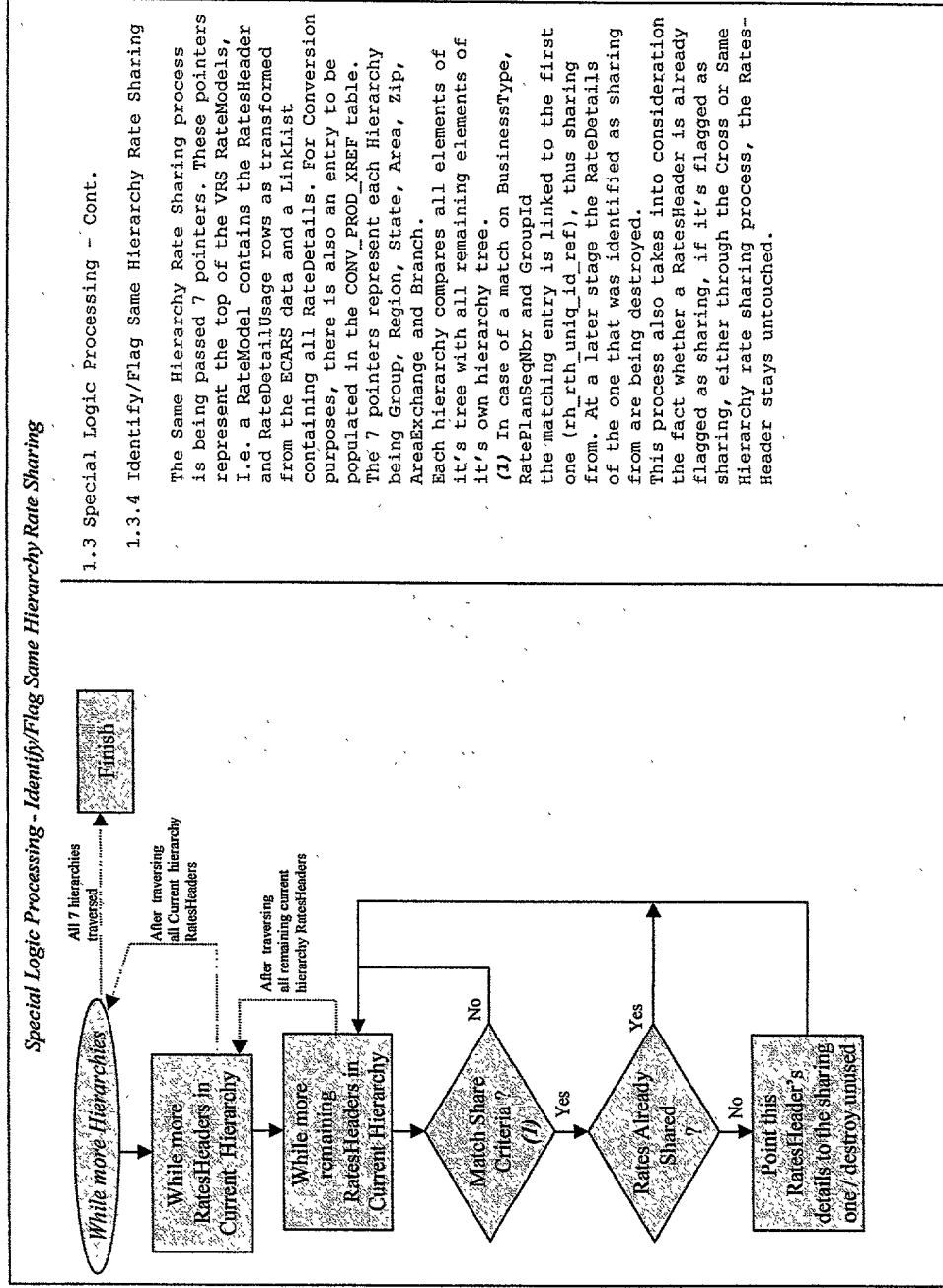
## 4.2 Detail Processing – Rate Flattening



### 4.3 Detail Processing – Rate Sharing / Cross Hierarchy

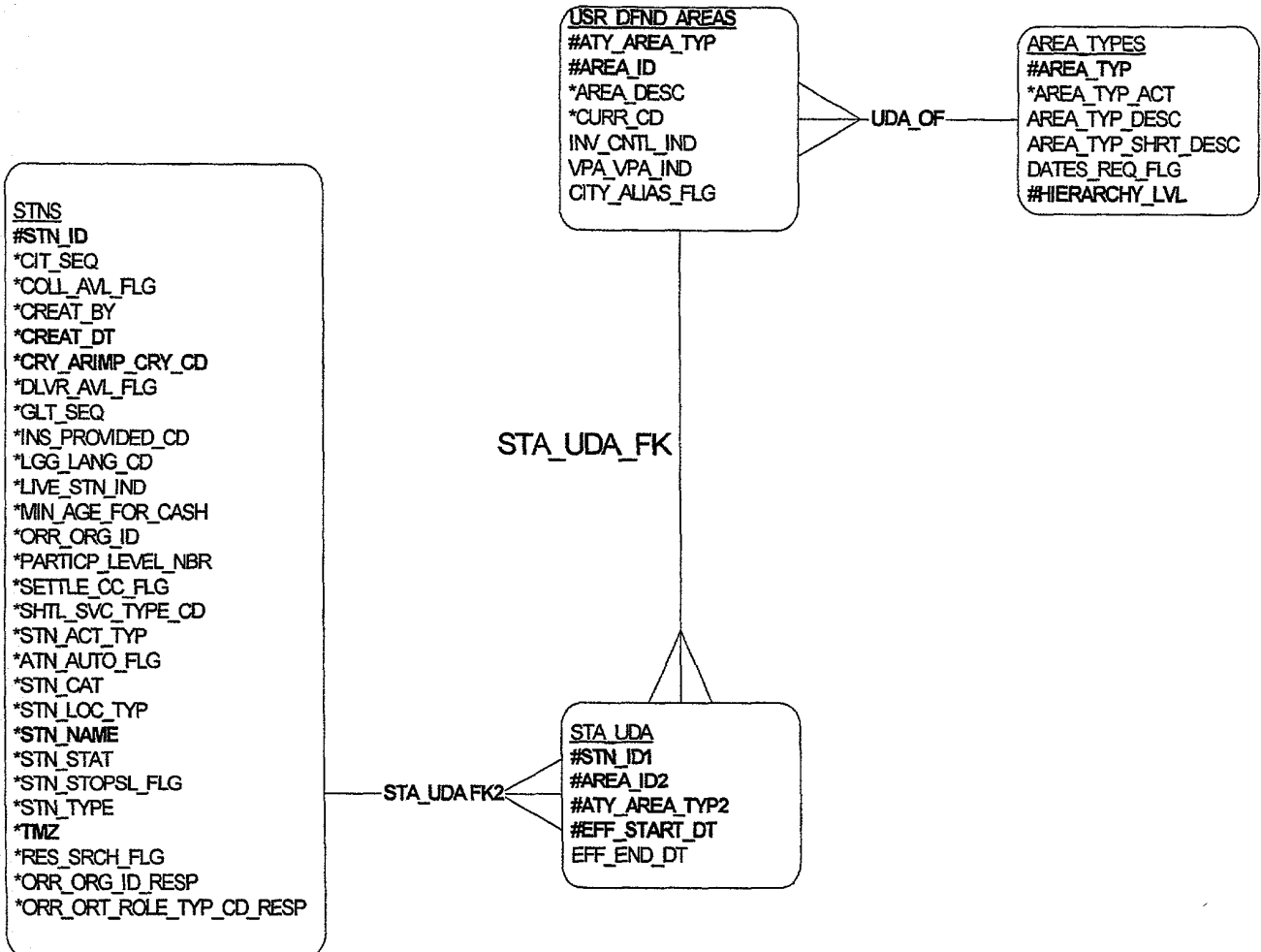


#### 4.4 Detail Processing – Rate Sharing / Same Hierarchy



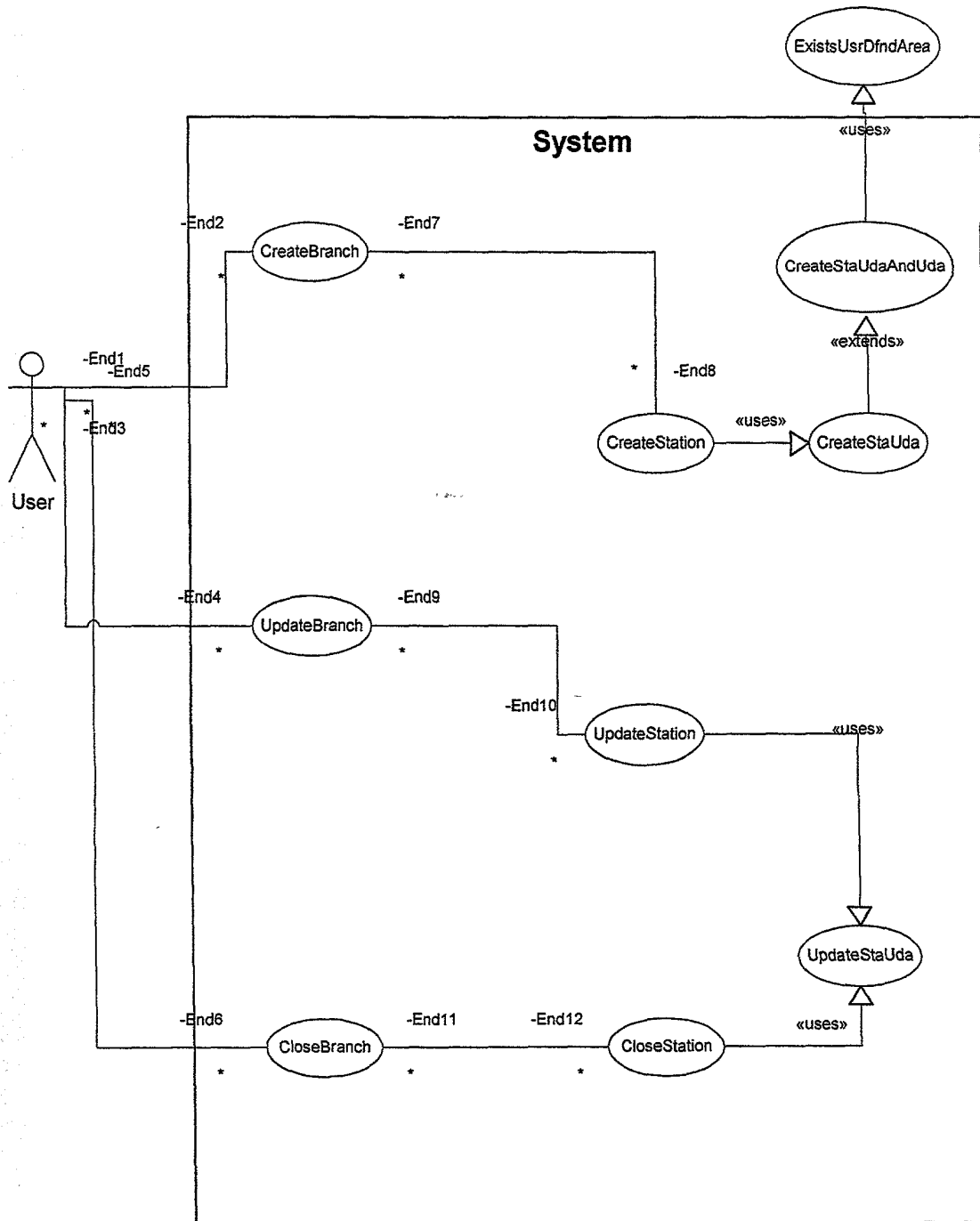


#### 4.5 VRS Data Model



\* Non bolded fields indicate that these are optional attributes for these entities. They are supported by VRS data model. At this time no specific use or business rule has been defined for ERAC implementation.

#### 4.6 UDA Hierarchy – Use Case Diagram





ECARS V2.0  
Accurate Out the Door Pricing

Detailed Design Specification  
Equipment Engine  
Iteration 3 - Final

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## Gaps Addressed Summary

Gap ID	Functional Area	Brief Description
90	Equipment	Currently, Enterprise can price coverages and additional products (ancillary items) for a specific rate plan or bill type. VRS does not support this function. Alternate proposal is to allow pricing coverages and additional products by location and default type. Station level values will be used if no entry is available for a given location and default type.
91	Equipment	Enterprise car class definition is potentially composed of two components: a car class and a car class suffix. VRS rate detail does not support any sort of car class suffix. ERAC needs to support 8 character vehicle car class plus 4 car class suffix
119	Equipment	Special equipment charges could be defined as weekly, monthly rate.
122	Equipment	Support additional vehicle features that are priced separately from the vehicle rate at the station level. Examples of these features are snow tires, Onstar system and so on.

## Document Control

### Primary Document Owner/Domain

Issued by: (PSC)

Name	Position/Department	Signature	Date
Nitin Palsule	Manager Rate Engine/Sub Engines		

### Customer Approval

Authorized by: (ERAC)

Name	Position/Department	Signature	Date

## Document History

Version	Date	Author	Reason for Change
1.0	05/14/01	Tom Brayman	Initial draft of Design Document
1.1	06/05/01	Tom Brayman	Added UDA at station level
2.0	09/10/01	Robert Srodulski	Added all Addendum information to baseline document.
2.1	11/05/01	Robert Srodulski	There were no functional impacts and/or Addendums for Iteration 3 - Equipment Engine.

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# 1 Introduction

## 1.1 Overview

The purpose of this document is to provide detailed design specifications of how the Equipment Engine component of the Vehicle Rental System (VRS) will be utilized in providing equipment types and charges in the retail line of business. This will reflect the complete design at a high level with reference to the gaps that will be delivered in iteration 2. This document is specifically for the equipment engine.

In VRS (Vehicle Rental System) Equipment Types (EQP\_ITEM\_TYPS), Equipment Charges (EQP\_CHGS), and Branch Equipment Charges (STN\_EQP\_CHGS) are the main entities used to satisfy the special equipment related requirements of a rental transaction.

These entities allow users to classify and associate a set of standard and customized equipment Types and associate them with the combination of product type, and/or product instance, location and vehicle category.

The Equipment Engine in VRS is used to retrieve the set of applicable Equipment Types and charges for a specified set of input parameters.

The design details of these data base entities and associated engine functionality as it applies to the Retail-SI business type of ERAC, are described in the following sections.

## 1.2 Dependencies

Dependencies with ERAC's Test windows.

## 1.3 Data Conversion

High level impacts to Data Conversion. A separate document will be published for data conversion design.

## 1.4 Impact Analysis

This section is not applicable for Iteration 2. This section will be relevant for subsequent iterations to track the differences between iteration 3 and 2, iteration 4 and 2 and so on.

## 2 Design Specifications – Data Components/Setup

### 2.1 Equipment Engine

#### 2.1.1 Equipment Types Use Case

The following defines information that pertains to this particular use case. Each piece of information is important in understanding the purpose behind the Use Case. VRS manages the master list of special equipment that is available to the application by association with a charge type. This list is stored in the Equipment Item Types table.

<b>Goal In Context:</b>	An ERAC user maintains the Equipment Types in the ECARS Equipment Item Types table.
<b>Scope:</b>	This Use Case deals with the Insert/Update activity on the Equipment Item Types table.
<b>Level:</b>	Sub functionality
<b>Pre-Condition:</b>	1. RRA_CHG_TYPS pre-populated with all relevant charge types.
<b>Success End Condition:</b>	An Equipment Item Type record is created with the appropriate database constraints defined for an Equipment Item Type Entity.
<b>Failed End Condition:</b>	The Equipment Item Type Record is not created.
<b>Primary Actor:</b>	The main actor is the User responsible for maintaining this information.
<b>Trigger Event:</b>	A Requirement to create a new Equipment Item type.

##### 2.1.1.1 Main Success Scenario Create Equipment Item Record

The equipment item types entity stores unique special equipment id's for a specific equipment type. ERAC specifies the charge type for the equipment and a detailed description of the special equipment. The pricing of the equipment is covered in separate use case documents dealing with branch or product related equipment charges.

The details of how these different Equipment Item types are structured within the VRS data model is explained below:

**Step 1:** User Creates the Equipment Item Type record in EQP\_ITEM\_TYPS table.

In the VRS data model, the EQP\_ITEM\_TYPS table stores all the valid special equipment type codes. Each special equipment type can be described using a 35 char wide text field called spcl\_eqp\_desc. In addition, for each equipment type, there is valid pre-defined charge type value associated with the record. The Charge Engine uses this field at the time of tax calculation and charge allocation.



The key attributes and some representative values are shown in the table below:

Special Equipment ID	Special Equipment Type Description	Charge Type
BST	Booster Seat	00067
CST	Child Seat	00068
CSI	Infant Seat	00069
SKV	Ski Rack	00072
PHN	Cell Phone	00071

### 2.1.1.2 Related Information

Below is the information related to the record in the RRA\_CHG\_TYPS table that is referenced from the EQP\_ITEM\_TYPS table above:

Charge Type	Description	Charge Category	Taxable
00068	CHILD SEAT - SPECIAL EQUIPMENT	SPE	Y
00072	SKI RACK - SPECIAL EQUIPMENT	SPE	Y
00071	CELL PHONE - SPECIAL EQUIPMENT	SPE	Y

The details of how the charge types associated with the Equipment Types will be covered in the Tax and Surcharges Document.

### 2.1.2 Equipment Charges Use Case

In VRS, the Equipment Charges table will be used to associate bundled products with special equipment. These bundled products have a date range associated with their availability. This use case explains the design details of the equipment charges information.

<b>Goal In Context:</b>	ERAC user maintains the Equipment Charges in the ECARS Equipment Charges table.
<b>Scope:</b>	This Use Case deals with Insert/Update activity on the Equipment Charges table
<b>Level:</b>	Sub Functionality
<b>Pre-Condition:</b>	EQP_ITEM_TYPS table pre-populated with all relevant Special Equipment Type information. PROD_INSTS table pre-populated with Product instance code.
<b>Success End Condition:</b>	Equipment Charges record created with appropriate database constraints defined for Equipment Charge Entity
<b>Failed End Condition:</b>	Equipment Charge Record not created.
<b>Primary Actor:</b>	The main actor is the User responsible for maintaining this information.
<b>Trigger Event:</b>	User who wants to change the equipment charges or the equipment charges attributes.

### 2.1.2.1 Main Success Scenario - Creates Record for Bundled Equipment Charge

The equipment charges entity stores unique equipment charge sequence for a specific equipment type. ERAC specifies the product code and the list of included equipment is displayed for that product instance, if applicable. The user can define additional equipment for the product instance by specifying the special equipment code, the reservation start and end date, the rental start and end date and the unbundled daily amount. The reservation start and end date, rental start and end date, product instance and product version are a constraint used by the equipment engine to return the available bundled equipment details. The applicable status indicator defaults to "I" for included and can not be changed. The special equipment code is available from a list of values based on the values in EQP\_ITEM\_TYPS table.

The details of how these different Equipment Charges are structured within the VRS data model is explained below.

#### Step 1: User Creates the Equipment Charge record in EQP\_CHGS table

In the VRS data model, the EQP\_CHGS table stores the attributes of the special equipment based on product instance. Each equipment charge has a reservation start and end date and a rental start and end date that the equipment is available for that product. In addition, for each equipment charge, there is an unbundled daily amount that specifies how much to charge for the equipment.

Some of the key attributes and their values are shown below:

Equip Chg Seq	EQP ID	Pickup Date	Return Date	Res Strt Date	Res End Date	Unbl'd Daily Amt	Appl Status Ind	Prod Inst Code
1	BST	15-May-2001	31-Dec-2037	15-May-2001	31-Dec-2037	3.00	I	ALTW
2	CST	15-May-2001	31-Dec-2037	15-May-2001	31-Dec-2001	4.00	I	ALTW
3	PHN	15-May-2001	31-Dec-2037	15-May-2001	31-Dec-2037	5.00	I	USSD

## 2.1.3 Branch Equipment Charges Use Case

In VRS, the Branch Equipment Charges table will be used to specify prices for each type of special equipment offered at a branch or at the hierarchy level of the location for the pricing purpose.. This use case explains the design details of branch equipment charges information to satisfy the equipment requirements of Enterprise's business.

<b>Goal In Context:</b>	ERAC user maintains the Branch Equipment Charges in the ECARS Branch Equipment Charges table
<b>Scope:</b>	This Use Case deals with Insert/Update activity on the Branch Equipment Charges table
<b>Level:</b>	Sub Functionality
<b>Pre-Condition:</b>	EQP_ITEM_TYPS table pre-populated with all relevant Special Equipment Type information. STNS table pre-populated with Branch ID.
<b>Success End Condition:</b>	Branch Equipment Charges record created.
<b>Failed End Condition:</b>	Branch Equipment Charges Record not created.
<b>Primary Actor:</b>	User responsible for maintaining Equipment data.
<b>Trigger Event:</b>	User who wants to change the special equipment charges or the equipment charges attributes at a specific branch.

### 2.1.3.1 Main Success Scenario - Creates Record for Branch Equipment Charges

**Step 1:** User Creates the Branch Equipment Charge record in STN\_EQP\_CHGS table

The branch equipment charges table is used to associate special equipment (i.e. PHN, CST, etc) to a particular class of product type, branch and car class and any other hierarchy class level where the rate is being defined, and determine specific prices. The equipment is available for all vehicle classes (ACAR) unless a specific vehicle class is defined. The special equipment must first be defined in the EQP\_ITEM\_TYPS table before the branch equipment charges attributes can be defined and the branch must exist. The daily amount and the max per rental amount are required for setup. The max per rental amount will be used to check for optimization if it is specified.

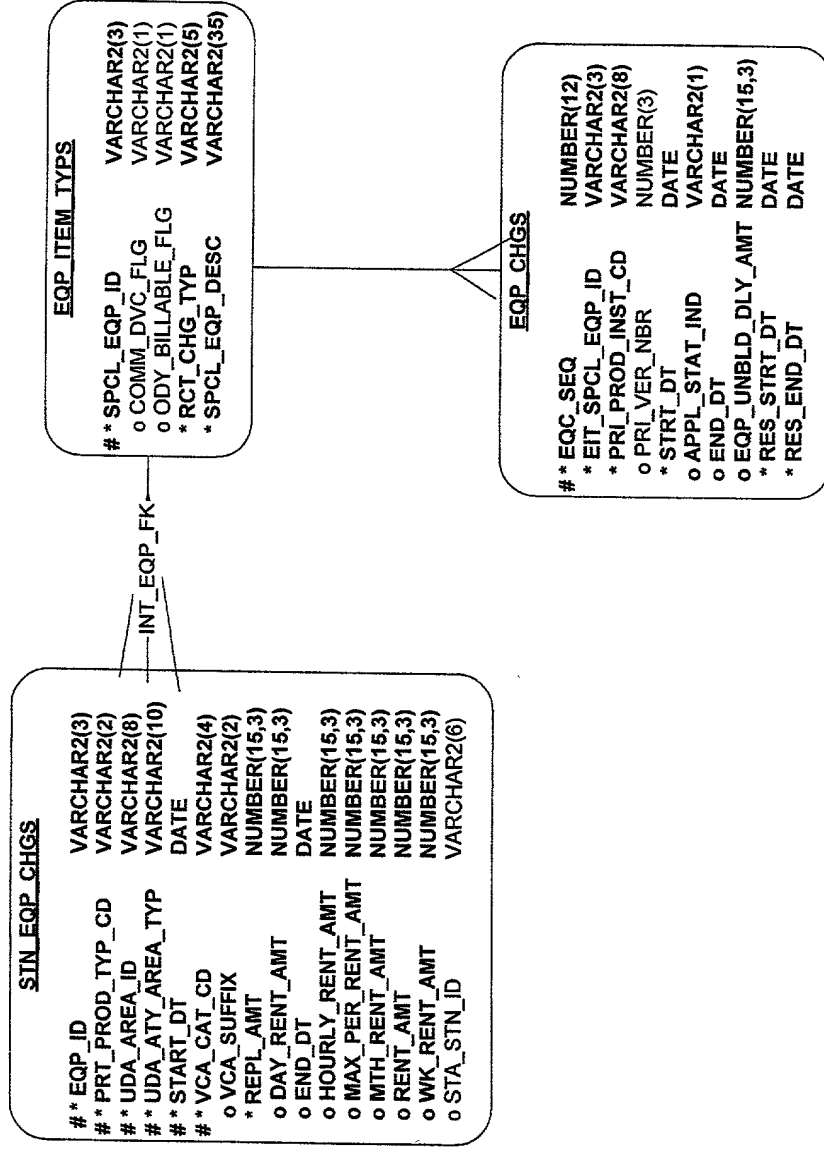
## Examples of records defined in STN\_EQP\_CHG

STN ID	EQP ID	UDA	UDA-Type	Product Type	Vehicle Class	Vehicle Class Suffix	Start Date	End Date	Replace Amount	Hourly Amount	Daily Amount	Weekly Amount	Monthly Amount	Per Rental Amount	Max Per Rental Amt
0109	BST	01	ATV GRP	'R'etail	ACAR	XX	15-May-2001		100.00		5.00			25.00	50.00
0109	LUG	01	ATV GRP	'R'etail	ACAR	XX	15-May-2001							30.00	
0109	CST	0109	ATV_BR	'R'etail	ACAR	XX	15-May-2001		100.00	1.00	5.00	35.00			75.00
0109	PHN	0109	ATV_BR	'R'etail	ACAR	XX	15-May-2001	01-Dec-2001	155.00		5.99	35.00			

- Branch ID – The code of the Branch offering the equipment.
- Equipment ID – Identifies the type of equipment available. List of values available based on records in EQP\_ITEM\_TYPS table.
- User Defined Area and Type – Station or the area covering station-rate hierarchy where this equipment is valid.
- Product Type – Classification of product for which the equipment is defined.
- Vehicle Class – Car class for which this charge is applicable.
- Vehicle Class Suffix – Additional identifier applied to certain classes of cars.
- Start Date – Beginning of price effective date range
- End Date – End of price effective date range
- Replacement Amount – Cost charged to renter if equipment is not return
- Hourly Amount – Cost to rent per hour
- Daily Amount – Cost to rent per day
- Weekly Amount – Cost to rent per week
- Per Rental Amount – Cost to rent per rental
- Max per Rental – The maximum charge for this piece of equipment per rental. Once this amount is reached, no further charges are applied

## 2.1.4 References: Data Model For Equipment Engine

Data Model for VRS Tables:



## 3 VRS Engines/ Services Design Specifications

### 3.1 Equipment Engine Processes

The equipment engine is a tuxedo service, which is called when information related to equipment details is required. Equipment engine is called internally by the rate search service if specific vehicle category code is provided at the time of the call. API for calling the equipment engine is exposed to the external systems so that it can also be called directly if user selects the vehicle category after rate search call and does not wish to obtain the list of valid equipment for the rental.

#### 3.1.1 Inputs

The following parameters are displayed in the order that they are needed. All Parameters must be sent. The mandatory/optional flags represent which information must be filled in for the Equipment Engine to return the correct equipment details and rates.

Equipment Engine Input Parameters - Version : 01.00				Technical	
Input Parameter	Notes	FML Field Name		Type	Size
Standard Header	The content of this header will be used for debugging, user test support, performance monitoring, tuning and error logging	refer to standard header document for layout and population rules	Mandatory		
eqengtv001_version	Identification string for this TUX interface	FN_EQENGTV001_VERSION	Optional	char	100
res_tmstp	Reservation Timestamp format YYYYMMDDHH24MI	FN_MEN_RES_TMSP	Mandatory	char	13
co_stn_id	Station (Branch) ID of pickup location	FN_MEN_CO_STN_ID	Mandatory	char	11
co_tmstp	Pickup Timestamp format YYYYMMDDHH24MI	FN_MEN_CO_TMSP	Mandatory	char	13
ci_tmstp	Return Timestamp format YYYYMMDDHH24MI	FN_MEN_CI_TMSP	Mandatory	char	13
eqp_list	List of specific products or ALL or FREE	FN_MEN_EQP_LIST	Mandatory	char	160
billing_cycle	Calendar day 'C' or 24 hour 'H' rate	FN_MEN_BILL_CYCLE	Mandatory	char	1
prod_type	Product Type ('R'etail, ...)	FN_MEN_PROD_TYP	Mandatory	char	1
prod_inst_cd	Code to relate it to a particular product instance	FN_MEN_PROD_INST_CD	Optional	char	9
prod_inst_ver	Version number of the product instance	FN_MEN_PROD_INST_VER	Optional	long	4
cat_cd	Vehicle Category Code	FN_MEN_CAT_CD	Mandatory	char	9
cat_cd_suffix	Suffix vehicle category	FN_MEN_CAT_CD_SFX	Optional	char	5
ci_grace_mins	Number of grace minutes allowed for vehicle return.	FN_MEN_CI_GRACE_MINS	Optional	long	4
curr_tab	Exchange Rate Type.	FN_MEN_CURR_TAB	Optional	char	11
co_curr	Pickup Branch Currency	FN_MEN_CO_CURR	Optional	char	4
area_ids	List of UDA's	FN_MEN_AREA_IDS	Optional	char	1000

VRS currently uses the first field of in an input buffer eqengtv001\_version to validate if caller and the service are using the identical version of the input and output buffers.

Return date is mandatory from Equipment engine perspective. If the return date is not known at the time of transaction

Client process will add 1 day to the pickup date before making the Equipment engine call

Product type is 'M'andatory for 'R'etail type of transaction at this stage.

### 3.1.2 Outputs

Equipment engine returns the list of special equipment and associated attributes for the specified rental. The output structure for this service and the associated details for the structure elements are described below.

If engine error field is anything other than '0' zero, then the results of the output buffer are undefined.

Record count indicates the number of equipment records returned for this call. The remaining fields in the output list after this field have multiple occurrences as indicated by the record count. The equipment code is returned along with a description of the equipment. The applicable charge type follows along with the vehicle category code the equipment is available for. The equipment amount is expressed in terms of hourly amount, daily amount, weekly amount, monthly amount, max amount per rental, and a per rental amount. Corresponding charge frequencies for each of the amount follows these. The charge frequency is optimized based on the values defined for various charge amounts (daily, weekly, monthly) only if the max per rental amount is specified. The Totals field is the total cost of selecting that equipment for this rental. The Included flag is 'I'nccluded.

Equipment Engine Output Parameters - Version : 01.00				Technical	
Output Parameter	Notes	FML Field Name		Type	Size
eqengt001_version	Identification string for this TUX interface	FN_EQENGT001_VERSION	Optional	char	100
engine_error	Error code returned	FN_EEN_ERR_STATUS	Mandatory	long	4
err_text	Error Text Returned	FN_EEN_ERR_MESSAGE	Optional	char	81
Number of Records (0 - 40)	Number of Equipment records returned	FN_EEN_REC_COUNT	Mandatory	long	4
eqp_id	Equipment ID's	FN_EEN_EQP_ID	Mandatory	char	4
eqp_desc	Equipment Description	FN_EEN_EQP_DESC	Mandatory	char	36
comm_dvc_flg	Comm Device Flag	FN_EEN_COMM_DVC_FLG	Mandatory	char	40
rnt_chg_typ	Charge Types	FN_EEN_EQP_RNT_CHG_TYP	Mandatory	char	6
cat_cd	Category Code	FN_EEN_CAT_CD	Mandatory	char	5
cat_cd_suffix	Suffix vehicle category	FN_MEN_CAT_CD_SFX	Mandatory	char	3
rnt_amt	Rental Amounts	FN_EEN_EQP_RNT_AMT	Mandatory	double	8
rnt_cnt	Rental Counts	FN_EEN_EQP_RNT_CNT	Mandatory	long	4
repl_cost	Replacement Cost	FN_EEN_EQP_REPL_COST	Mandatory	double	8
hr_rnt_amt	Hourly Rental Amounts	FN_EEN_EQP_HR_RNT_AMT	Optional	double	8
hr_cnt	Number of Hours to charge	FN_EEN_EQP_HR_CNT	Optional	long	4
dy_rnt_amt	Daily Amounts	FN_EEN_EQP_DY_RNT_AMT	Optional	double	8
dy_cnt	Number of days to charge	FN_EEN_EQP_DY_CNT	Optional	long	4
wk_rnt_amt	Weekly Rental Amounts	FN_EEN_EQP_WK_RNT_AMT	Optional	double	8
wk_cnt	Number of weeks to charge	FN_EEN_EQP_WK_CNT	Optional	long	4
mo_rnt_amt	Monthly Rental Amounts	FN_EEN_EQP_MO_RNT_AMT	Optional	double	8
mo_cnt	Number of months to charge	FN_EEN_EQP_MO_CNT	Optional	long	4
tot_rnt_amt	Calculated Totals	FN_EEN_EQP_TOT_RNT_AMT	Mandatory	double	8
max_rnt_amt	Max Charge per Rental Amount	FN_EEN_EQP_MAX_RNT_AMT	Optional	double	8
incl_flg	Included Flags	FN_EEN_INCL_FLG	Mandatory	char	1
part_flg	Part Flag	FN_EEN_PART_FLG	Mandatory	char	1
unblnd_dy_rnt_amt	Unbundled Daily Rental Amount	FN_EEN_UNBLD_DY_RNT_AMT	Optional	double	8





### 3.1.3 Detailed Process Flow

The Equipment Engine provides valid equipment details and charges for a rental based on product type selected, vehicle category and pick up location. There are three different call modes for the Equipment Engine. The call modes are: "ALL", "\_FREE\_" or a specific list of equipment types. The ALL mode is used to return all equipment available at a branch. The "\_FREE\_" mode is used to return all free (bundled) equipment available at a branch. The Equipment Engine will return all valid equipment and charges up to 40 for each call mode and the applicable charge for hourly, daily, weekly, monthly, or per rental amounts for each equipment type and the GUI will determine whether to apply daily, weekly, monthly or per rental charges on the transaction.

The Equipment Item Types table combined with the Station Equipment Charges tables contains the information needed to return the proper special equipment available based on vehicle category and branch id.

Each Pickup Location may not have equipment information set up at the Branch Level. This requires that the Equipment Engine traverse through the 11 levels of Rate Hierarchy list for the specified pickup location starting with the lowest level. The traversal of the rate hierarchy is stopped, when one or more valid equipment types are found at a particular level. The equipment types will not be a composite of each level.

Refer to the use case document on the UDA-Rate Hierarchy for additional details for the rate hierarchy.

The first step is to locate the branch record within the STA\_UDA table using the Branch ID. Once located the additional information required for the hierarchy search would now be available. The STA\_UDA table may contain a record for each level of the hierarchy that the branch is associated with.

The Equipment Engine formats the pick up and return timestamps, to a standard date format and then calculates the rental duration in number of days and hours, taking grace minutes into consideration.

If the product is specified in the inputs, the bundled equipment is retrieved for the product specified. A constraint is placed on the selection of the bundled equipment. The Equipment Types table combined with the Equipment Charges table contains the information needed to return the proper equipment for the calling location.

The bundled equipment selection must be available based on the input pickup and reservation dates against the values setup in the Equipment Charges table. The following details how to find the list of applicable bundled equipment for the specific rental:

PRODUCT = :prod\_inst\_cd  
co\_tmnp between the Start Date and End Date  
res\_tmnp between Reservation Start Date and Reservation End Date

Each Branch may not have any special equipment defined at the Branch Level. In this case, the bundled equipment list is empty.

The equipment list is prepared to make the selection of the available equipment for the branch and vehicle class combination. The equipment list can have the following values:

Equipment List	Meaning
ALL	All equipment available
FREE	Free (bundled) equipment available
CST BST PHN ...	Specific equipment list

The FREE equipment list will return the equipment details for all the bundled equipment defined for the product instance specified. The equipment ids are retrieved based on the follow conditions:

Product Instance = Input Product Instance and

Pickup date must be between the EQP\_CHGS.start\_date and EQP\_CHGS.end\_date and

Reservation date must be between EQP\_CHGS.res\_start\_date and EQP\_CHGS.res\_end\_date

Once the equipment ids are return, the list is parsed out to retrieve each equipment type.

If a specific equipment list is given, the list is parsed out to allow each equipment type to be selected.

The branch specific equipment details and charges are gathered based on the equipment list, branch and vehicle class. The Equipment Types table combined with the Branch Equipment and Branch Equipment Charges table contains the information needed to return the equipment details and charges for the calling location.

If the equipment list is ALL, the following conditions must be meet in order for the equipment to be available:

Branch = Pickup Branch and

Vehicle Category = cat\_cd or "ACAR" and

Product Type = "R" and

Allocated Quantity > 0 and

Pickup Date must be between Stop Sell Start Date and Stop Sell End Date and

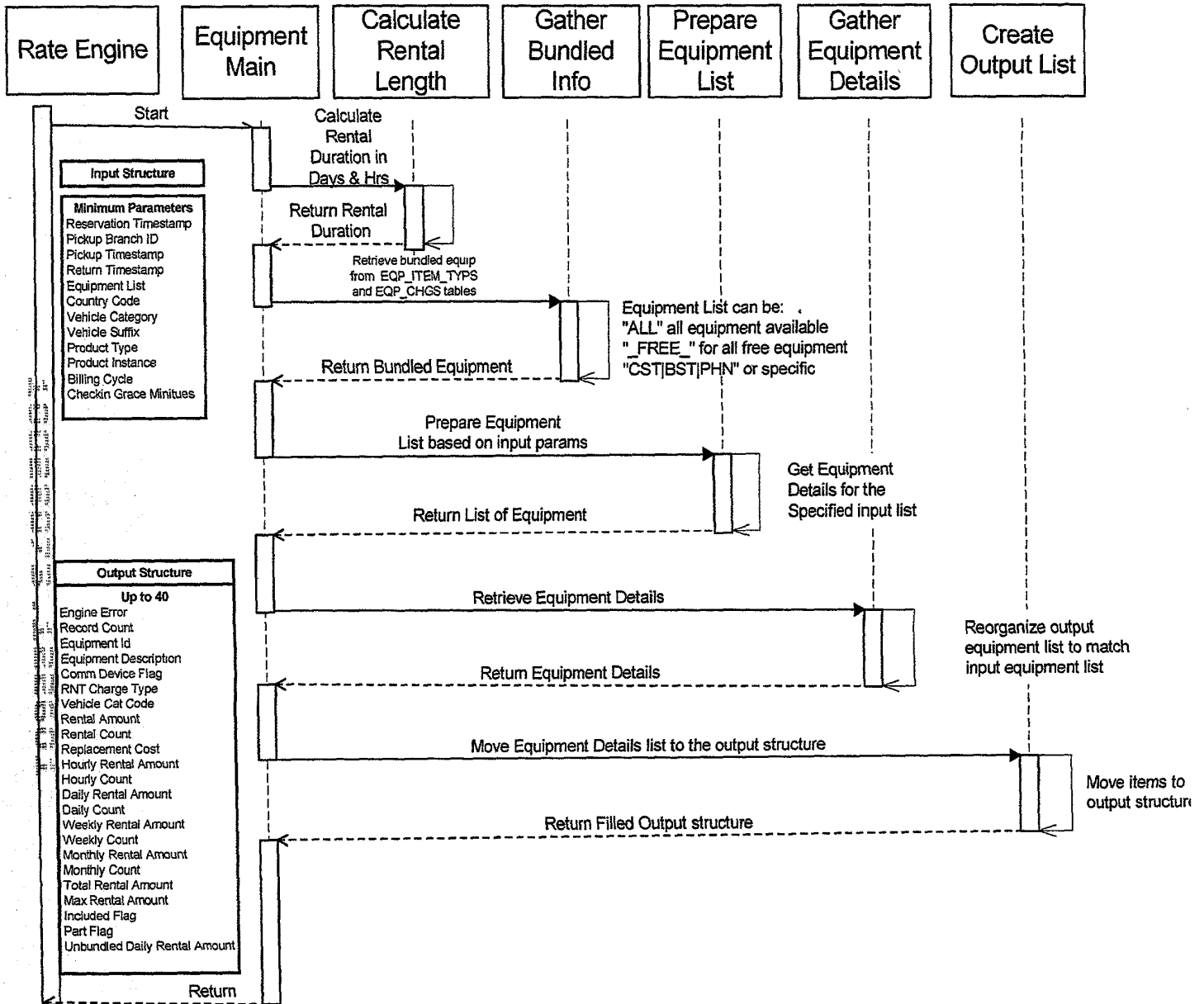
Pickup Date must be between Start Date and End Date and

Equipment Status = "F" or "R" or

if Equipment Status = "S" then the Stop Sell Over ride Days < Rental Duration Days

For FREE and specific equipment list, in addition to the conditions above, the following condition must be meet in order for the equipment to be available:

Equipment Id in Equipment List.





### 3.1.3.1 Scenarios

Different scenarios are used to illustrate the variation in the output list of equipment based on the inputs as indicated below. For the purpose of this illustration we will assume that the EQP\_CHGS and STN\_EQP\_CHGS tables in VRS are populated as indicated below.

Records in Equipment Charges (EQP\_CHGS) Table:

EQP ID	Product Instance	Start Date	End Date	Status Indicator	Res Start Date	Res End Date	Unbundled Daily Amount
BST	B213	15-May-2001	31-Dec-2037	I	15-May-2001	31-Dec-2037	
CST	B213	15-May-2001	31-Dec-2037	I	15-May-2001	31-Dec-2037	
PHN	B213	15-May-2001	31-Dec-2037	I	15-May-2001	31-Dec-2037	1.95

Records in the Station Equipment Charges (STN\_EQP\_CHGS) Table for Branch 0109:

STN ID	EQP ID	UDA	UDA-Type	Product Type	Vehicle Class	Vehicle Class Suffix	Start Date	End Date	Replace Amount	Hourly Amount	Daily Amount	Weekly Amount	Monthly Amount	Per Rental Amount	Max Per Rental Amt
0109	BST	01	ATY_GRP	R'tail	ACAR	XX	15-May-2001		100.00		5.00			25.00	50.00
0109	CST	0109	ATY_BR	R'tail	ACAR	XX	15-May-2001		100.00	1.00	5.00	35.00			75.00
0109	PHN	0109	ATY_BR	R'tail	ACAR	XX	15-May-2001	01-Dec-2001	155.00		5.99	35.00			

### 3.1.3.1.1 Individual Scenarios 1

#### Scenario 1: Rental is being made for the location 0109 with vehicle car class of ECAR

##### Input Parameters:

Branch 0109  
Res Date 200107011000  
Pickup Date 200107011000  
Return Date 200107081000  
Equipment List BST|CST|PHN  
Product Type R  
Product Instance ALTW  
Vehicle Cat ECAR  
Cat. Cd. Suffix Null  
Grace Minutes 0

The output lists all equipment available for specific vehicle category. The output list also shows that the optimization is being done for BST and CST with the charge frequency based on the daily, weekly, monthly amounts available for equipment and the length of rental as indicated by the input parameters. There is no optimization on the PHN because the max per rental amount is not applicable.

The output records returned would be:

Field	Value(s)		
Engine Error	0		
Record Count	3		
Equipment ID's	BST	CST	PHN
Equipment Description	booster seat	child seat	cell phone
Comm Device Flag	N	N	N
Charge Type	0067	0068	0071
Category Code	ECAR	ECAR	ECAR
Suffix vehicle category			
Rental Amount	25.00		
Rental Count	1	1	1
Replacement Cost	100.00	100.00	155.00
Hourly Rental Amount		1.00	
Number of Hours to charge	0	0	0
Daily Amounts	5.00	5.00	5.99
Number of days to charge	1	1	1
Weekly Rental Amounts		35.00	35.00
Number of weeks to charge	0	0	0
Monthly Rental Amounts			
Number of months to charge	0	0	0

Field	Value(s)		
Totals	5.00	5.00	5.99
Max Charge per Rental Amount	50.00	75.00	
Included Flags	I	I	I
Part Flag	Y	Y	Y
Unbundled Daily Rental Amount			

### 3.1.3.1.2 Individual Scenario 2

**Scenario 2: Rental is being made for the location 0109 with vehicle car class as ECAR**

Input Parameters:

Branch 0109  
Res Date 200107011000  
Pickup Date 200107011000  
Return Date 200107081000  
Equipment List \_FREE\_  
Product Type R  
Product Instance B213  
Vehicle Cat ECAR  
Cat. Cd. Suffix Null  
Grace Minutes 0

In this case, only the bundled equipment for the specified vehicle category and product instance is returned. The output records returned would be:

Field	Value(s)
Engine Error	0
Record Count	1
Equipment ID's	PHN
Equipment Description	cell phone
Comm Device Flag	N
Charge Type	0071
Category Code	ECAR
Suffix vehicle category	
Rental Amount	
Rental Count	1
Replacement Cost	155.00
Hourly Rental Amount	
Number of Hours to charge	0
Daily Amounts	5.99
Number of days to charge	1
Weekly Rental Amounts	35.00
Number of weeks to charge	0
Monthly Rental Amounts	

Field	Value(s)
Number of months to charge	0
Totals	5.99
Max Charge per Rental Amount	
Included Flags	I
Part Flag	Y
Unbundled Daily Rental Amount	1.95

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## 4 Key Risks, Assumptions and Issues

### 4.1 Risks

### 4.2 Assumptions

### 4.3 Issues

#### 4.3.1 Zero as a valid value

During the detailed design review it was indicated that zero could be a valid value for any of the charge amounts. VRS currently uses zero in charge amount to indicate the presence of null. We need to agree on another convention for VRS engines to communicate presence of null.

#### 4.3.2 All Equipment Charges will be line item

During the detailed design review it was indicated that special equipment for Europe might be billed as a blended rate. Our recommendation is for Europe to use individual access code to create blended rates. The VRS system will compute all equipment charges not created this way as a line item.



ECARS V2.0  
Accurate Out the Door Pricing

Detailed Design Specification  
General Conditions Engine  
Iteration 3 - Final

**perotsystems™**

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## Gaps Addressed Summary

Gap ID	Functional Area	Brief Description
80	General Conditions	Ability to return general conditions for all car classes when a specific car class is not requested.
90	General Conditions	Need ability to associate general conditions by some combination of location and default type.
91	General Conditions	Enterprise car class definition is potentially composed of two components: a car class and a car class suffix. VRS rate detail does not support any sort of car class suffix. ERAC needs to support 6 character vehicle car classes.

## Document Control

### Primary Document Owner/Domain

Issued by: (PSC)

Name	Position/Department	Signature	Date
Nitin Palsule	Manager Rate Engine/Sub Engines		

### Customer Approval

Authorized by: (ERAC)

Name	Position/Department	Signature	Date

## Document History

Version	Date	Author	Reason for Change
1.0	05/14/01	Stacy Moore	Initial draft of Design Document
1.1	05/18/01	Stacy Moore	Edit from feedback – Internal Review
1.2	05/23/01	Stacy Moore	Merge Use Case format into standard design template.
1.3	06/08/01	Stacy Moore	Updated after customer review
2.0	08/30/01	Tom Brayman	Initial draft for Iteration 3
2.1	08/30/01	Tom Brayman	Added section 2.2 – Proposed Rate Rules VRS Implementation and subsections 2.2.1 and 2.2.2 Added two new scenarios for Iteration 3 sections 3.1.3.1.3 and 3.1.3.1.4 . Also edited the following sections: 2.1 – General Conditions Engine 3.1.3.1 – Scenarios
2.2	09/10/01	Robert Srodulski	Change to Section 3.1.1 Input API. Country code field changing from 3 to 4.
2.3	09/18/01	Robert Srodulski	Internal review updates for Iteration 3
2.4	11/01/01	Robert Srodulski	Iteration 3 - Final

# 1 Introduction

## 1.1 Overview

The purpose of this document is to provide detailed design specifications of how the General Conditions Engine component of the Vehicle Rental System (VRS) will be utilized in providing messages in the retail line of business. This will reflect the complete design at a high level with reference to the gaps that will be delivered in iteration 2. This document is specifically for the general conditions engine.

In VRS (Vehicle Rental System) General Conditions (GEN\_CNDS) and Rental Conditions (RNT\_CNDS) are the two main entities used to satisfy the messaging related requirements of a rental transaction.

These entities allow users to classify and associate a set of standard and customized General Conditions and associate them with the combination of product instance, distribution channel, location based rate hierarchy and vehicle category through the use of a Rental Condition.

The General Conditions Engine of VRS is used to retrieve the set of applicable conditions for a specified set of input parameters.

The design details of these data base entities and their associated engine functionality as it applies to the Retail-SI business type of ERAC, are described in the following sections.

## 1.2 Dependencies

Dependencies with ERAC's Test windows.

## 1.3 Data Conversion

A separate document will be published for data conversion design.

## 1.4 Impact Analysis

The primary difference between iterations 2 and 3 is the introduction of the product type code field. Although it was introduced but not implemented in iteration 2, the distribution channel will be implemented in this iteration.

## 2 Design Specifications – Data Components/Setup

### 2.1 General Conditions Engine

The Data Components/Setup for the General Condition Engine is the same as iteration 2. However, the VRS system will be enhanced to accommodate the NATRES rate rule system. There are five types of rate rules: Deposit Rule, Guarantee Rule, Mileage Rule, Miscellaneous Rule, and Pickup/Return Rule. This document will address the first four. Pickup/Return Rules will be implemented with VRS Rate Qual. This topic is addressed in another document. The rate rules are associated to a group and branch combination (area id). Within a specific group/branch combination, rules are further broken down by car class and rate plan code. Each rule has an effective start and end date and a rule code that maps to the rule description in the rate rule header file. The rule descriptions are broken down into the four rate rules mentioned above. Each rate rule detail file contains the specific data for the four types of rules listed above and is retrieved using the rule type and rule code.

#### 2.1.1 General Conditions Use Case

The following defines information that pertains to this particular use case. Each piece of information is important in understanding the purpose behind the Use Case.

<b>Goal In Context:</b>	Retail products can have related conditions based on branch location. When a general condition is created, the data will be added to the General Conditions (GEN_CNDS) table.
<b>Scope:</b>	This Use Case deals with Create activity on the general conditions table (GEN_CNDS).
<b>Level:</b>	
<b>Pre-Condition:</b>	CG_REF_CODES table populated with Type domain values
<b>Success End Condition:</b>	General condition record created.
<b>Failed End Condition:</b>	General condition not created successfully
<b>Primary Actor:</b>	User responsible for maintaining general condition data.
<b>Trigger Event:</b>	New general condition is created.

### 2.1.1.1 Main Success Scenario

#### Scenario: User Creates New General Condition

In VRS, the messages associated with the rental are implemented using two tables: GEN\_CNDS (General Conditions) and RNT\_CNDS (Rental Conditions). The General Conditions table defines the types or classes of messages and allows the user to add the text describing the general condition. The Rental Conditions table allows a user to specify a detailed message for a particular general condition type (see types below) and associate it with the combination of product instance, distribution channel, station, UDA-based rate hierarchy and vehicle class definition.

There are three steps in creating a General Condition:

**Step 1:** User defines the type of general condition to create. Currently for VRS, the type must be one of the following domain values:

AGE	PAYMENT
BEST RATING	PROMOTION PRODUCTS
BLACKOUT	PUBLIC PRODUCTS
COUPON	REFERENCE
COVERAGES	REFUELING
DLV COLL	RESTRICTION
ELIGIBILITY	RETAIL
EQUIPMENT	SERVICE
FREESSELL	TAXES
FUEL	TRAVEL PROGRAMS
GUARANTEE	UPSELL
GUARANTEE RES	DEPOSIT
MX RENTALS	MILEAGE
NOSHOW	MISCELLANEOUS
ONEWAY	

The Type domain values shown above are representative of the types currently supported by VRS. The domain values can be configured to reflect the Enterprise way of classifying the 2 lines of SI text currently in use. In order to accomplish this, a new domain value can be added to reflect the requirement to display these two lines of text. The domain values are found on the CG\_REF\_CODES table.

**Step 2:** User provides general condition Lines 1-30. At a minimum, Line 1 (CND\_LN1) must be supplied.



**Step 3:** User saves the record. The row is created in the general conditions (GEN\_CNDS) table. The primary key for this record is the condition ID (CND\_ID). The condition ID is an Oracle generated sequenced value.

Column Description	Column Name	Data Type
#Condition ID	CND_ID	Number(6)
Condition Type	TYP	Varchar2(20)
Condition Line 1	CND_LN1	Varchar2(75)
Condition Lines 2-30	CND_LN2-CND_LN30	Varchar2(75)

\* **Bolded fields represent mandatory attributes for General Condition's entity.**

The following data is provided by a user to create a general condition:

Condition Type: REFERENCE

Condition Line 1: Do not offer vehicle upgrades

Condition Lines 2-30: <BLANK>

The following record will be added to the general conditions table (GEN\_CNDS):

Condition ID	Condition Type	Condition Line 1	Condition Line 2
620	ELIGIBILITY	To be eligible for this rate, renter must be resident of Australia	
631	AGE	Renter must be 21 years or older to rent. Young renter fee does not apply.	
645	SERVICE	If customer waits more than 45 minutes for a vehicle	Apply a \$25 courtesy adjustment
648	AGE	Renter must be 25 years or older to rent	
<b>655</b>	<b>REFERENCE</b>	<b>Do not offer vehicle upgrades</b>	

\* **Bolded row represents new entry for iteration 3**

### 2.1.1.2 Update of a General Condition

The only information that can be updated for an existing general condition is Condition Lines 1-30. An existing line may be modified or a new line may be added to the record. No other updates may be made to the record. In order to update or add a line, the user selects the record and makes the modification or addition.

### 2.1.1.3 Deletion of a General Condition

A user does not have the ability to physically delete an existing general condition if it is attached to a rental condition. The general condition can be deleted if and only if it is not attached to a rental condition.

## 2.1.2 Rental Condition Use Case

In VRS, the rental conditions (RNT\_CNDS) table will be used to associate a General Condition with Products and/or Contracts at the specific location or at the hierarchy level of the location. This use case explains the design details of rental conditions information used to satisfy the messaging requirements of Enterprise's retail business as defined in iteration 2 of the project scope document.

<b>Goal In Context:</b>	<u>Relate a General Condition to a product type and location</u>
<b>Scope:</b>	This Use Case deals with Create activity on the rental conditions table (RNT_CNDS).
<b>Level:</b>	Sub Functionality
<b>Pre-Condition:</b>	<ol style="list-style-type: none"> <li>1. Branch inserted into appropriate User Defined Area entity and populated with all the branch data.</li> <li>2. User Defined Area entity populated with the appropriate area_id's</li> <li>3. General Condition exist on GEN_CNDS table</li> <li>4. Product instance entity populated with product instances</li> <li>5. <u>Product Types entity populated with product types</u></li> </ol>
<b>Success End Condition:</b>	Rental condition record created with appropriate referential integrity for all the related entities such as general conditions, UDA's, vehicle categories and product instances
<b>Failed End Condition:</b>	Rental condition not created successfully
<b>Primary Actor:</b>	User responsible for maintaining rental condition data.
<b>Trigger Event:</b>	New rental condition is created.

### 2.1.2.1 Main Success Scenario: User Creates Rental Condition Record

**Step 1:** User selects a general condition to attach to a rental condition from the general conditions table (GEN\_CNDS). The general condition must already exist on the GEN\_CNDS table.

**Step 2:** User provides the following information for the rental condition:

- Start date of the rental condition (mandatory)
- End date of the rental condition (optional)
- Product instance code associated with rental condition (mandatory with a default of 'ALL')
- Product type associated with rental condition (mandatory)
- Distribution channel associated with a rental condition (mandatory)
- Vehicle category to associate with rental condition (mandatory with a default of 'ACAR')
- User area (UDA) ID rental condition is associated with (mandatory)
- User Area Type (mandatory)
- How to handle general condition. Sample values and there meanings are:
  - A - Display during reservation and print on rental contract
  - B - Display during reservation only
  - D - Display during reservation and rental
  - R - Display during rental only
  - Y - Mandatory for reservation entry
  - N - Not mandatory for reservation entry

These domain values are representative of the types currently supported by VRS. This list can be configured to reflect the Enterprise way of classifying display statuses currently in use. The domain for these values is located in the CG\_REF\_CODES table.

Column Description	Column Name	Data Type
Rental Condition ID	RCN_ID	Number (8)
Display Status	DSP_STAT	Varchar2(1)
General Condition ID*	GCD_CND_ID	Number(6)
Start Date	STRT_DT	Date
UDA Area ID*	UDA_AREA_ID	Varchar2(10)
UDA Area Type	UDA_ATY_AREA_TYP	Varchar2(10)
Vehicle Car Class	VCA_CAT_CD	Varchar2(8)
Vehicle Car Class Suffix	CAR_CLS_SUFEX_CDE	Varchar2(4)
Product Type	PRT_PROD_TYP_CD	Varchar2(2)
Distribution Channel	DIST_CHNL_CDE	Varchar2(12)
Product Instance Code*	PRI_PROD_INST_CD	Varchar2(8)
Version Number	PRI_VER_NBR	Number(3)
Contract Condition ID*	CCO_CNTRCTL_CND_ID	Number(8)
End Date	END_DT	Date
Product ID	PROD_ID	Varchar2(4)
Reservation End Date	RES_END_DT	Date
Reservation Start Date	RES_STRT_DT	Date
Comment Line 1	RNT_CMT_LN1	Varchar2(75)
Comment Line 2	RNT_CMT_LN2	Varchar2(75)
Rental Description	RNT_DESC	Varchar2(2000)
Product Category	RNT_PROD_CAT	Varchar2(1)

\*UDA\_AREA\_ID is a Foreign Key from the USR\_DFND\_AREAS table

\*PRI\_PROD\_INST\_CD is a foreign key from the PROD\_INSTS table

\*CCO\_CNTRCTL\_CND\_ID is a foreign key from the CNTRCTL\_CNDS table

\*GCN\_CND\_ID is a foreign key from the GEN\_CNDS table

\*\***BOLDED** fields denote attributes having business values for this iteration

The user provides the following data to create a rental condition:

General condition to create rental condition for: **655**  
Rental condition Start Date: **07-01-2001**  
Product Instance code to associate condition to: **'ALL'**  
Product Type to associate condition to: **'R'etail**  
User area to associate condition for: **0109**  
User Area type: **ATY\_BR**  
How to handle condition: **Y**  
Car Class: **'ACAR'**  
Distribution Channel: **WEB**

The following row is created in the rental conditions table (RNT\_CNDS):

RCN_ID	DSP_S TAT	GCD_C ND_ID	STRT_DT	PRI_PROD_ INST_CD	PRI_PR OD_TYP	UDA_AREA ID	UDA_ATY_ AREA_TYP	CAR CLASS	DIST_CHNL
2001	D	620	06/03/01	AW57E	'R'	01	ATY_GRP	ACAR	ALL
2002	D	645	07/01/01	ALL	'R'	0109	ATY_BR	ACAR	BRANCH
2003	B	648	07/08/01	WES0	'R'	0111	ATY_BR	ACAR	ALL
<b>2004*</b>	<b>Y</b>	<b>655</b>	<b>07/01/01</b>	<b>ALL</b>	<b>'R'</b>	<b>0109</b>	<b>ATY_BR</b>	<b>ACAR</b>	<b>WEB</b>

\* Bolded row represents new entry for iteration 3

#### 2.1.2.2 User Modifies a Rental Condition

The only modifications allowable for an existing rental condition are to comment Lines 1-2. These are free text fields and text can be added, modified or deleted. Each line can hold up to 75 characters.

#### 2.1.2.3 User Deletes a Rental Condition

A rental condition is not physically deleted, rather logically deleted. In order to logically delete a rental condition, an end date is provided for the record. By providing an end date, the record is considered no longer active, thus logically deleted.

#### 2.1.2.4 User Creates a Rental Condition for all Vehicle Categories

In order to associate a rental condition for all vehicle categories, the user will provide a car class of 'ACAR'. This will associate a rental condition to all car classes.

#### 2.1.2.5 User Creates a Rental Condition for all Product Instances

In order to associate a rental condition for all product instances, the user will provide a product instance code of 'ALL'. This will associate a rental condition to all product instances.

## 2.2 Proposed Rate Rules VRS Implementation

The proposed VRS solution involves:

- Utilizing the existing VRS General Conditions structure
- Introduce two new display statuses of 'Y' and 'N' for the location rate rule association field "mandatory for reservation entry".
- Introduce three new condition types, MILEAGE, MISCELLANEOUS, DEPOSIT. GUARANTEE is already defined as a condition type.
- Combining all the similar rule codes per group/branch combination into one general condition.

From the observation of the records for Group 01 and Branch 10, it appears that the location rate rule association has the same rule code for all car classes and rate plan code. If this is the case, for each group/branch combination, one general condition could be created for each rule code. If the rule code does vary by car class, then a general condition can be created for each car class.

The current VRS messaging system can not separate messages based on the rate plan codes of daily, weekly, monthly. Weekend is implemented as a separate product in VRS. The messages will be all the same for a product and location.

### 2.2.1 ERAC Rate Rules to VRS General Conditions Scenario 1

(NATRES is the data source for examples below)

Given the following ERAC Location Rate Rule Association:

Group Code	Branch Code	Pre-Arranged Discount	Car Class	Rule Type	Rule Code	Eff. Date	End Date	Rate Plan Code	Mandatory for Res. Entry
01	10	G	CCAR	MILE	M01003	20010215	20350215	D	Y
01	10	G	CCAR	MILE	M01003	20010215	20350215	E	Y
01	10	G	CCAR	MILE	M01003	20010215	20350215	M	Y
01	10	G	CCAR	MILE	M01003	20010215	20350215	W	Y
01	10	G	FCAR	MILE	M01003	20010215	20350215	D	Y
01	10	G	CCAR	MISC	Z01037	20010215	20350215	W	N
01	10	G	ECAR	GUAR	G01000	20010215	20350215	E	N
01	10	G	LCAR	DPST	D10002	20010215	20350215	D	Y

Given the following ERAC Rate Rule Header:

Rule Type	Rule Code	Rule Description
DPST	D10002	\$500/NO CANCEL FEE
GUAR	G01000	GUARANTEED RATE
MILE	M01003	BORDER STATES ONLY
MISC	Z01037	PHL TRANS TAX

**Given the following ERAC Rate Rule Detail for Mileage and Miscellaneous:**

Rule Type	Rule Code	Record Sequence	Rule Text
MILE	M01003	1	MILEAGE IS UNLIMITED WHEN VEHICLE REMAINS IN THE
MILE	M01003	2	RENTING STATE OR BORDERING STATES. VEHICLES ARE NOT
MILE	M01003	3	ALLOWED OUTSIDE OF THESE STATES.
MISC	Z01037	1	THERE IS A \$2.00 PER DAY TRANSPORTATION TAX CHARGED BY
MISC	Z01037	2	THE STATE OF PENNSYLVANIA. THIS IS A MANDATORY CHARGE
MISC	Z01037	3	FOR ALL RENTERS.

**Given the following ERAC Rate Rule Detail for Guarantee:**

Rule Type	Rule Code	Record Sequence	Guar Days	Guar Begin Date	Guar End Date	Guarantee Text
GUAR	G01000	1	365	0	0	GUARANTEE WITH RESERVATION

**Given the following ERAC Rate Rule Detail for Deposit:**

Rule Type	Rule Code	Record Sequence	Deposit Amount	Currency Code	Dep Days	Dep Begin Date	Dep End Date	Deposit Text
DPST	D01001	1	50.00	USD2	0	0	0	\$50 DEPOSIT W/ 2 WEEK CANCEL
DPST	D01027	1	200.00	USD2	0	19960725	99999999	\$200 DEPOSIT WITH 72 HR CANCEL

## 2.2.2 VRS General Conditions Equivalent

Using the above tables for rule type MILE and rule code M01003, the VRS general conditions equivalent is condition type MILEAGE. The VRS general conditions equivalents for rule type MISC and rule code Z01037 is condition type MISCELLANEOUS. The same relationship follows for rule type DPST and GUAR.

Note: These are guidelines for data setup, not rules for conversion.

The following records will be added to the general conditions table (GEN\_CNDS):

Condition ID	Condition Type	Condition Line 1	Condition Line 2	Condition Line 3
320	MILEAGE	MILEAGE IS UNLIMITED WHEN VEHICLE REMAINS IN THE	RENTING STATE OR BORDERING STATES. VEHICLES ARE NOT	ALLOWED OUTSIDE OF THESE STATES.
331	MISCELLANEOUS	THERE IS A \$2.00 PER DAY TRANSPORTATION TAX CHARGED BY	THE STATE OF PENNSYLVANIA. THIS IS A MANDATORY CHARGE	FOR ALL RENTERS.
332	GUARANTEE	GUARANTEE WITH RESERVATION		
333	DEPOSIT	\$50 DEPOSIT W/ 2 WEEK CANCEL		

If the Rule Description in the Rate Rule Header file is needed, it will be put in condition line1 and the rate rule text will be shifted to condition line x where x is the record sequence number plus 1.

The following records are created in the rental conditions table (RNT\_CNDS):

RCN ID	DSP STAT	GCD CND ID	STRT DT	END DT	PROD INST	PRI_PRO D_TYP	AREA ID	AREA TYP	CAR CLASS	CAR SUFX	DIST CHNL
3001	Y	320	20010215	20350215	RTLM1	R	0110	ATY BR	ACAR	**	WEB
3002	N	331	20010215	20350215	RTLM1	R	0110	ATY BR	ACAR	**	ALL
3003	N	332	20010215	20350215	RTLM1	R	0110	ATY BR	ECAR	**	ALL
3004	Y	333	20010215	20350215	RTLM1	R	0110	ATY BR	LCAR	**	GDS

## 3 VRS Engines/ Services Design Specifications

### 3.1 General Conditions Engine Processes

In VRS, the General Conditions Engine provides valid messages for a rental dependent on the product type, product instance code, date of rental, distribution channel and location of the rental. All valid messages will be returned to the calling program. As with other sub-engines, the General Conditions Engine will traverse the rate hierarchy levels to determine the lowest level where a rental condition is defined for a product type, starting with the lowest level BRANCH. When the messages are found at a level in the hierarchy, the traversal of the rate hierarchy is stopped.

The General Condition Engine is a tuxedo service that is called when information related to general conditions is required. Certain parameters must be sent to the engine for it to properly return the correct information. Up to 25 rental conditions can be returned from a call.

#### 3.1.1 Inputs

VRS currently uses the first field of an input buffer (conengtv001\_version) to validate if a caller and the service are using the same version of input and output buffers. Different versions will result in the service call being terminated and an error message being returned to the caller.

The check out branch, check out time stamp, distribution channel, product instance and product type are the only mandatory fields required to correctly return general conditions for a retail product. Failure to provide these fields to the General Conditions Engine will result in the call being terminated and an error message being returned to the caller.

General Conditions Engine Input Parameters - Version : 01.00						
Input Parameter	Notes	FML Field Name		Technical Type	Size	Source of Data
Standard Header	The content of this header will be used for debugging, user test support, performance monitoring, tuning and error logging	Refer to standard header document for layout and population rules	Mandatory			All Clients
View Version String	Identification string for this TUX interface	FN_CONENGTV001_VERSION	Mandatory	char	100	TBX View
res_tmstp	Reservation Timestamp format YYYYMMDDHH24MI	FN_MEN_RES_TMSP	Optional	char	13	Client App
co_str_id	Branch ID of pickup location	FN_MEN_CO_STR_ID	Mandatory	char	11	Client App
co_cty	Country Code of pickup location	FN_MEN_CO_CTY	Optional	char	4	Client App
co_tmstp	Pickup Timestamp format YYYYMMDDHH24MI	FN_MEN_CO_TMSP	Mandatory	char	13	Client App
ci_tmstp	Return Timestamp format YYYYMMDDHH24MI	FN_MEN_CI_TMSP	Optional	char	13	Client App
cat_cd	Vehicle Code	FN_MEN_CAT_CD	Optional	char	9	Client App
cat_cd_sfx	Suffix vehicle category	FN_MEN_CAT_CD_SFX	Optional	char	5	Client App
area_ids	Area ID's of User Defined Areas	FN_MEN_AREA_IDS	Optional	char	1000	Rate Engine
Prod_inst_cd	Code to relate it to a particular product instance	FN_MEN_PROD_INST_CD	Mandatory	char	9	Rate Engine
Prod_inst_ver	Version number of the product instance	FN_MEN_PROD_INST_VER	Optional	long	4	Rate Engine



General Conditions Engine Input Parameters - Version : 01.00 - Cont.				Technical		Source of
Input Parameter	Notes	FML Field Name		Type	Size	Date
Prod_type	Product type (Retail ...)	FN MEN PROD_TYP_CD	Mandatory	char	3	Rate Engine
dist_chnl	Distribution channel of transaction	FN MEN DIST_CHNL	Mandatory	char	13	Rate Engine
cont_id	Contract ID	FN MEN CONT_ID	Optional	long	4	Client App
cntrctl_cnd_id	Contractual Condition ID	FN MEN CNTRCTL_CND_ID	Optional	long	4	Client App
cntrctl_cnd_null	Contractual Condition Null	FN MEN CNTRCTL_CND_NULL	Optional	long	4	Client App
best_rate_ind	Best Rate Indicator	FN MEN BEST_RATE_USED	Optional	Char	3	Rate Engine
Prod_usg_status	Product Usage Status	FN MEN PROD_USG_STATUS	Optional	Char	3	Rate Engine

### 3.1.2 Outputs

The General Conditions Engine returns the list of general conditions and associated attributes for the specified rental. The output structure for this service and the associated details for the structure elements are described below. The outputs from the General Conditions Engine are returned in a prioritized order based on the following order of precedence: child customer, root customer, product instance, all distribution channels, specific distribution channels, specific car class and 'ACAR'.

The engine error field captures the error number associated with the service call. Any value other than zero indicates that an error occurred and the results of the output buffer are undefined.

Record count (rec\_count) indicates the number of conditions returned from this call. The remaining fields in the output structure after this field have multiple occurrences as indicated by the record count (rec\_count). The General Conditions engine can return up to 25 records per call.

The structure elements indicated as C\_<element name> are the count member as defined by the Tuxedo FML buffer specifications. There is a count field in the structure for each of the fields having multiple occurrences in the output buffer.

The general condition ID (cnd\_id) field contains the ID of the general condition selected from the General Conditions table (GEN\_CNDS).

The display status (dsp\_status) field contains the one character identifier used to determine how the condition is to be displayed.

The condition line 1, condition line 2, condition line 3 and condition line 4 fields (cnd\_ln1, cnd\_ln2, cnd\_ln3, cnd\_ln4) are used to store the text associated with the general condition. Although a general condition can have up to 30 lines of text associated with it, the General Conditions Engine only returns the first four lines. The remaining lines of text can be retrieved using the condition ID as a key to retrieve the lines from the general conditions (GEN\_CNDS) table. Current VRS functionality does not accommodate this process and this feature would require the development of a new maintenance screen and service.

The comment line 1 and comment line 2 fields (cmt\_ln1, cmt\_ln2) are used to store the text associated with the rental condition.

General Conditions Engine Output - Version : 01:00				Technical		Source Of
Output Parameter	Notes	FML Field Name	Rules	Type	Size	Data
Error_no	Server error Code or 0	FN_CEN_ERR_STATUS	Mandatory	long		
err_text	Server Error Text	FN_CEN_ERR_MESSAGE	Optional	char	81	
rec_count	Number of records returned	FN_CEN_REC_COUNT	Mandatory	Long		
cnd_id	Up to 25 condition ID's	FN_CEN_CND_ID	Optional	Long	[25]	GEN_CNDS
dsp_status	Up to 25 display statuses.	FN_CEN_DSP_STATUS	Optional	Char	[25][2]	RNT_CNDS
cnd_ln1	General Condition Line 1	FN_CEN_CND_LN1	Optional	Char	[25][76]	GEN_CNDS
cnd_ln2	General Condition Line 2	FN_CEN_CND_LN2	Optional	Char	[25][76]	GEN_CNDS
cnd_ln3	General Condition Line 3	FN_CEN_CND_LN3	Optional	Char	[25][76]	GEN_CNDS
cnd_ln4	General Condition Line 4	FN_CEN_CND_LN4	Optional	Char	[25][76]	GEN_CNDS
cmt_ln1	Comment Line 1	FN_CEN_CMT_LN1	Optional	Char	[25][76]	RNT_CNDS
cmt_ln2	Comment Line 2	FN_CEN_CMT_LN2	Optional	Char	[25][76]	RNT_CNDS
add_lns_avl_flg	Additional lines available flag which indicates more than 4 General Condition Lines are available to be displayed	FN_CEN_ADD_LNS_AVL	Optional	Char	[25][1]	

### 3.1.3 Detailed Process Flow

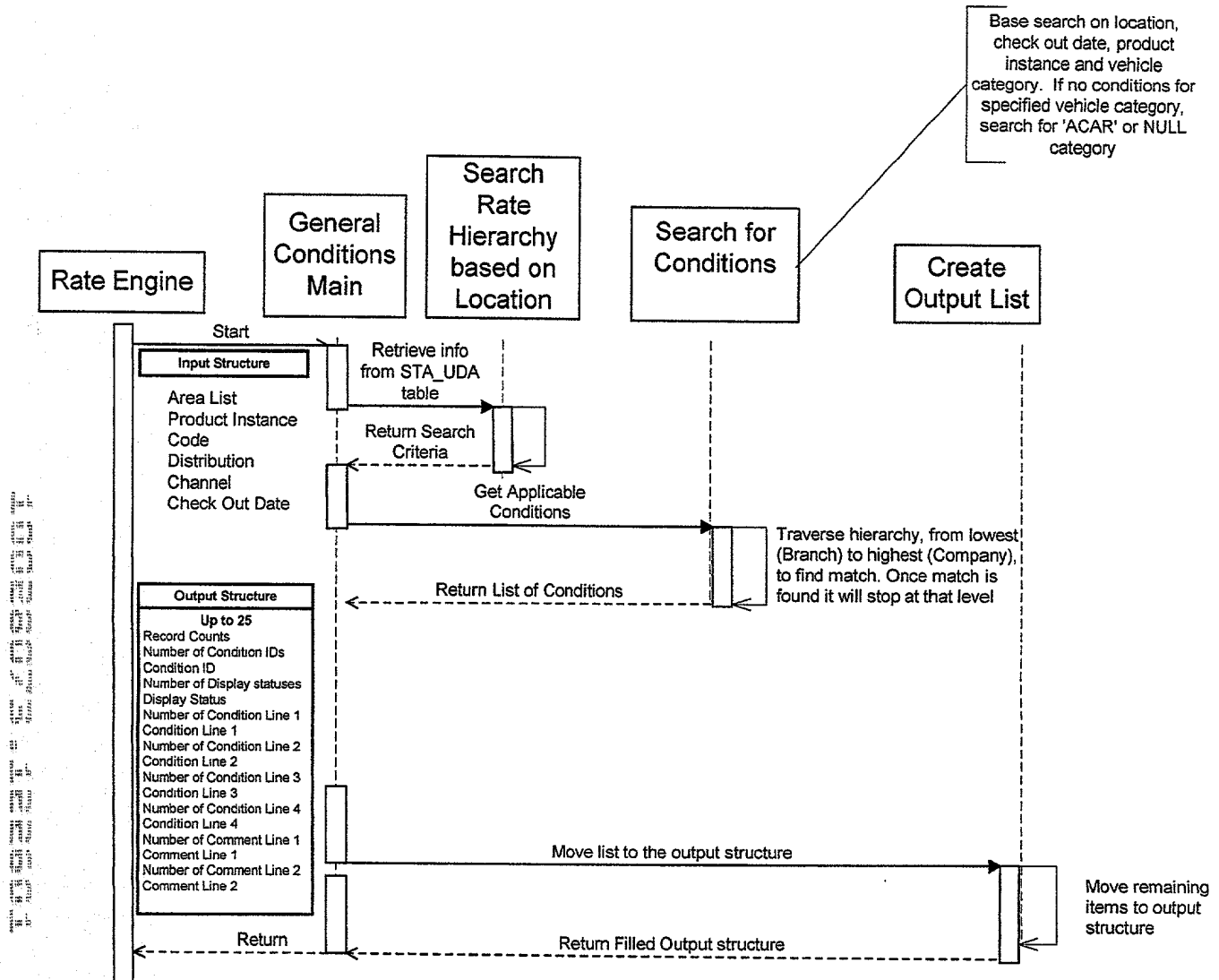
The Rental Conditions (RNT\_CNDS) table combined with the General Conditions (GEN\_CNDS) table contains the information needed to return valid rental conditions for the product type, check out date, and check out location. A rental condition can be defined for a product type at any given level of the rates hierarchy. The General Conditions Engine can receive as input an area list containing the user defined areas (UDAs) a branch belongs to. If the area list is not provided by the calling service, the General Conditions Engine builds the area list by querying the Station UDA (STA\_UDA) table.

This list, having been passed or built, combined with the distribution channel, product type, vehicle code and check out time stamp, is used to search the rental conditions (RNT\_CNDS) table for valid conditions. The rates hierarchy list is traversed until one or more valid entries are found. Once a valid entry is found, the traversing of the rates hierarchy is terminated. All valid rental conditions defined at this level are captured by the Engine and returned to the calling program.

The current implementation returns the Superset of messages defined for the combination of Specific Product + standard rate type (product type) + Specific Car Class + ACAR for the lowest rate hierarchy level. For Iteration 3 the returned set of records will be filtered down to :

From the lowest hierarchy level for a Specific Distribution Channel in this order:

1. Specific Product + Specific Car Class (Example RTLM1 + ECAR).
2. Specific Product + ACAR (Example RTLM1 + ACAR).
3. Specific Product type + Specific Car Class (R + ECAR).
4. Specific Product type + ACAR (R + ACAR).



### 3.1.3.1 Scenarios

Different scenarios are used to illustrate the variation in the output list of conditions types based on the inputs as indicated below.

For the purpose of this illustration we will assume that the General Conditions table in VRS is populated as indicated below.

Cnd Id	Typ	Cnd Ln1	Cnd Ln2
620	ELIGIBILITY	To be eligible for this rate, renter must be resident of the US	
631	AGE	Renter must be 21 years or older to rent. Young renter fee does not apply.	
645	SERVICE	If customer waits more than 45 minutes for a vehicle	Apply a \$25 courtesy adjustment

Cnd Id	Typ	Cnd Ln1	Cnd Ln2
648	AGE	Renters must be 25 years or older to rent	
655	REFERE NCE	Do not offer vehicle upgrades	
350	REFERE NCE	MAJOR CCARD PREFERRED	
355	REFERE NCE	RETAIL RENTER. MUST VERIFY HOME ADDRESS	
370	MILEAG E	MILEAGE IS UNLIMITED WHEN VEHICLE REMAINS IN THE RENTING STATE	OR BORDERING STATES
371	MISCELL ANEOUS	THERE IS A \$2.00 PER DAY TRANSPORTATION TAX CHARGED BY THE STATE OF PENNSYLVANIA. THIS	IS A MANDATORY CHARGE
375	RETAIL	RENTERS MUST BE 25 YEARS OR OLDER TO RENT	
378	DEPOSIT	\$50 DEPOSIT W/2 WEEK CANCELLATION	
385	MISCELL ANEOUS	COUPONS HAVE SPECIAL REQUIREMENTS - MUST CALL BRANCH FOR RATES/RULES IF CUSTOMER	MENTIONS THEY HAVE A COUPON

For the purpose of the illustration, we will assume that the Rental Conditions table in VRS is populated as indicated below.

RCN_ID	DSP_STAT	GCD_CND_ID	STRT_DT	PRI_PROD_INST_CD	PROD_TYP	UDA_AREA_ID	UDA_ATY_AREA_TYP	CAR CLASS	DIST_CHNL
2001	D	620	06/03/01	ALL	R	01	ATY_GRP	ACAR	ALL
2002	D	645	07/01/01	ALL	R	0109	ATY_BR	ACAR	BRANCH
2003	B	648	07/08/01	ALL	R	0111	ATY_BR	ACAR	ALL
2004	D	655	07/01/01	ALL	R	0109	ATY_BR	ACAR	BRANCH
<b>3008</b>	<b>D</b>	<b>350</b>	<b>06/03/01</b>	<b>RTLM1</b>	<b>R</b>	<b>0109</b>	<b>ATY_BR</b>	<b>ACAR</b>	<b>BRANCH</b>
3009	D	355	07/01/01	ALL	R	0109	ATY_BR	ECAR	BRANCH
3011	N	370	06/03/01	RTLM1	R	0109	ATY_BR	ACAR	GDS
3012	D	375	07/01/01	RTLM1	R	0101	ATY_BR	ACAR	BRANCH
3013	Y	371	07/01/01	RTLM1	R	0101	ATY_BR	ACAR	WEB
3014	Y	378	07/08/01	RTLM1	R	0101	ATY_BR	ACAR	WEB
3015	N	385	07/01/01	ALL	R	0109	ATY_BR	ECAR	GDS

\* Bolded row represents new entry for iteration 3

### 3.1.3.1.1 Scenario 1 - Rental is being made for the location 0109

Input Parameters:

Branch 0109  
 Pickup Date 200107011000  
 Product Type R  
 Product Instance RTLM2  
 Distribution Channel BRANCH  
 Car Class SCAR

For the above scenario, the STA\_UDA table is first searched to build an area list comprised of areas where the branch ID 0109 exists. Once this is completed, the rental conditions (RNT\_CNDS) table is searched for valid conditions based on the area list, the distribution channel, product type, product instance code, car class and the check out date of the rental. Based on the sample data above, the following records would be returned by the General Conditions Engine.

The list of returned records:

Type	Name	Records Returned [1]	Records Returned [2]
Long	Engine_error	0	
Char	err_text		
Long	Rec_count	2	
Long	cnd_id	645	655
Char	dsp_status	D	D
Char	cnd_ln1	If customer waits more than 45 minutes for a vehicle	Do not offer vehicle upgrades
Char	cnd_ln2	Apply a \$25 courtesy adjustment	
Char	cnd_ln3		
Char	cnd_ln4		
Char	cmt_ln1		
Char	cmt_ln2		

### 3.1.3.1.2 Scenario 2 - Rental is being made for the location 0108

Input Parameters:

Branch 0108  
 Pickup Date 200107061000  
 Product Type R  
 Product Instance Code RTLM2  
 Distribution Channel BRANCH  
 Car Class SCAR

In this scenario, there are no records on the rental conditions table defined at the branch level for branch ID 0108. The engine then continues searching for a valid entry at the next level of the hierarchy until a valid entry is found. In this example, the engine selects the following record which is valid for all branches in group 01:

Type	Name	Records returned [1]
Long	Engine_error	0
Char	Err_text	
Long	Rec_count	1
Long	Cnd_id	620
Char	Dsp_status[25]	D
Char	Cnd_ln1	To be eligible for this rate, renter must be resident of the US
Char	Cnd_ln2	
Char	Cnd_ln3	
Char	cnd_ln4	
Char	cmt_ln1	
Char	cmt_ln2	

### 3.1.3.1.3 Scenario 3 - Rental is being made for the location 0101

#### Input Parameters:

Branch 0101  
Pickup Date 200107011000  
Product Type R  
Product Instance RTLM1  
Distribution Channel WEB  
Car Class FCAR

For the above scenario, the STA\_UDA table is first searched to build an area list comprised of areas where the branch ID 0101 exists. Once this is completed, the rental conditions (RNT\_CNDS) table is searched for valid conditions based on the area list, the distribution channel, product type, product instance code, car class and the check out date of the rental. Based on the sample data above, the following records would be returned by the General conditions Engine.

#### The list of returned records:

Type	Name	Records Returned [1]	Records Returned [2]
Long	engine_error	0	
Char	err_text		
Long	rec_count	2	
Long	cnd_id	371	378
Char	dsp_status	Y	Y
Char	cnd_ln1	THERE IS A \$2.00 PER DAY TRANSPORTATION TAX CHARGED BY THE STATE OF PENNSYLVANIA. THIS	\$50 DEPOSIT W/2 WEEK CANCELLATION
Char	cnd_ln2	IS A MANDATORY CHARGE	
Char	cnd_ln3		
Char	cnd_ln4		
Char	cmt_ln1		
Char	cmt_ln2		

### 3.1.3.1.4 Scenario 4 - Rental is being made for the location 0109

Input Parameters:

Branch 0109  
Pickup Date 200107061000  
Product Type R  
Product Instance Code RTLM1  
Distribution Channel GDS  
Car Class LCAR

In this scenario, the engine selects the following record which is valid for all branches with distribution channel GDS:

Type	Name	Records returned [1]
Long	engine_error	0
Char	err_text	
Long	rec_count	1
Long	cnd_id	370
Char	dsp_status	N
Char	cnd_ln1	MILEAGE IS UNLIMITED WHEN VEHICLE REMAINS IN THE RENTING STATE
Char	cnd_ln2	OR BORDERING STATES
Char	cnd_ln3	
Char	cnd_ln4	
Char	cmt_ln1	
Char	cmt_ln2	

### 3.1.3.1.5 Scenario 5 - Rental is being made for the location 0109

Using the same scenario as above except changing the car class from LCAR to ECAR.

Input Parameters:

Branch 0109  
Pickup Date 200107061000  
Product Type R  
Product Instance Code RTLM1  
Distribution Channel GDS  
Car Class ECAR

In this scenario, the engine selects the following record which is valid for all branches with distribution channel GDS:

Type	Name	Records Returned [1]	Records Returned [2]
Long	engine_error	0	
Char	err_text		
Long	rec_count	2	

Type	Name	Records Returned [1]	Records Returned [2]
Long	cnd_id	370	385
Char	dsp_status	N	N
Char	cnd_ln1	MILEAGE IS UNLIMITED WHEN VEHICLE REMAINS IN THE RENTING STATE	COUPONS HAVE SPECIAL REQUIREMENTS - MUST CALL BRANCH FOR RATES/RULES IF CUSTOMER
Char	cnd_ln2	OR BORDERING STATES	MENTIONS THEY HAVE A COUPON
Char	cnd_ln3		
Char	cnd_ln4		
Char	cmt_ln1		
Char	cmt_ln2		

### 3.1.3.1.6 Scenario 6 - Rental is being made for the location 0109

Input Parameters:

Branch 0109  
Pickup Date 200107061000  
Product Type R  
Product Instance Code RTLM2  
Car Class ECAR  
Distribution Channel BRANCH

In this scenario, the engine selects the following record which is valid for all branches with distribution channel BRANCH and Car Class of ECAR:

Even though records 645 and 655 are valid for the BRANCH distribution code they have a car class of ACAR. Using the new selection criteria they would be eliminated by the availability of record 355 which is an ECAR.

Type	Name	Records Returned [1]
Long	engine_error	0
Char	err_text	
Long	rec_count	1
Long	cnd_id	355
Char	dsp_status	D
Char	cnd_ln1	RETAIL RENTER. MUST VERIFY HOME ADDRESS
Char	cnd_ln2	
Char	cnd_ln3	
Char	cnd_ln4	
Char	cmt_ln1	
Char	cmt_ln2	



**3.1.3.1.7 Scenario 7 - Rental is being made for the location 0109**

If the above scenario is modified such that the product instance code is RTLM1, then  
Input Parameters:

Branch 0109  
Pickup Date 200107061000  
Product Type R  
Product Instance Code RTLM1  
Car Class ECAR  
Distribution Channel BRANCH

In this scenario, the engine selects the following record which is valid for all branches with distribution channel BRANCH and Car Class of ECAR and Product Instance of RTLM1  
Only record 350 will be returned as all others fail Product Instance, Car class and order criteria.

Type	Name	Records Returned [1]
Long	Engine error	0
Char	err text	
Long	Rec count	1
Long	cnd_id	350
Char	dsp_status	D
Char	cnd_ln1	MAJOR CCARD PREFERRED
Char	cnd_ln2	
Char	cnd_ln3	
Char	cnd_ln4	
Char	cmt_ln1	
Char	cmt_ln2	

## 4 Key Risks, Assumptions and Issues

### 4.1 Risks

### 4.2 Assumptions

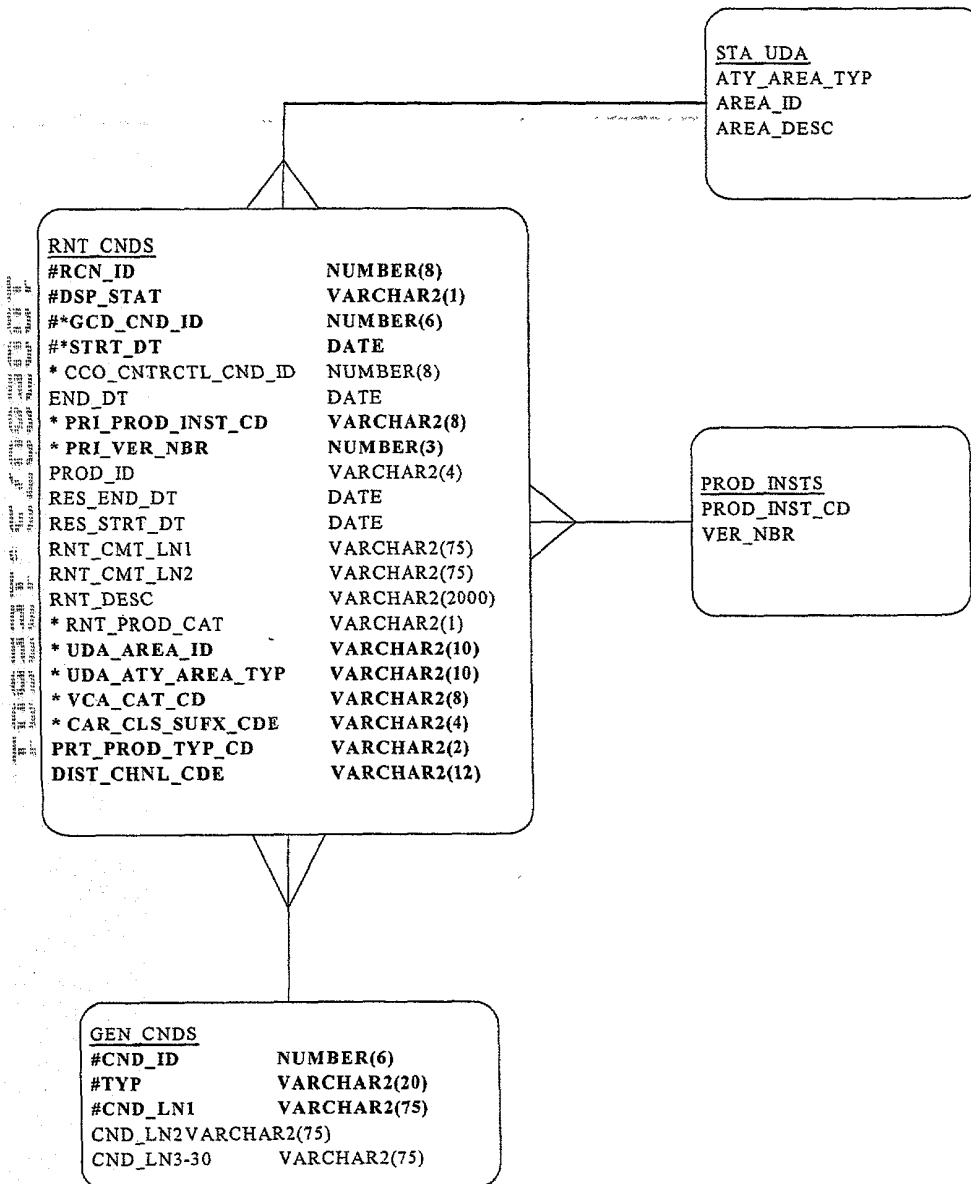
- If the rate rule text is the same for the NATRES rate plan code and car class, the message can be implemented as one general condition using ACAR as car class.
- NATRES file structure currently allows rate rules to vary by rate plan (daily, weekly, monthly). In VRS, messages can not vary at this level.
- NATRES rate rule details, such as DPST, have additional fields that will not be supported by VRS messaging structure.
- The guarantee days will be implemented at the product instance using the guaranteed days field.
- Messages are defined only for the highest level of distribution channel hierarchy.
- The General Conditions Engine will return all messages meeting the following search conditions:
  1. Message must exist for the given UDA hierarchy and
  2. Message defined for a specific product type and
  3. Message defined for a specific car class or ACAR and
  4. Message defined for a specific product instance code or ALL and
  5. Message defined for a specific distribution channel or ALL.

### 4.3 Issues

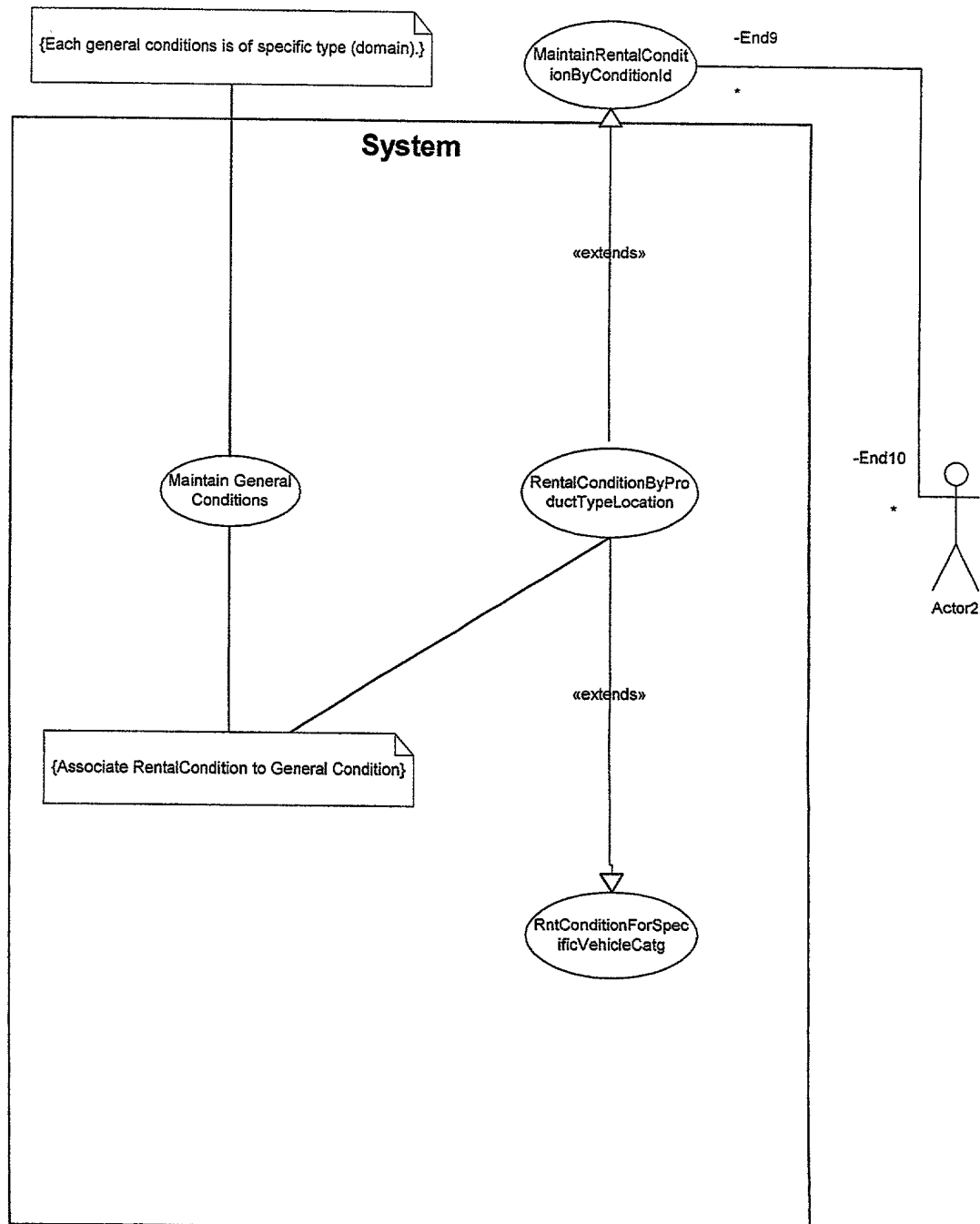
N/A

## 5 Appendices

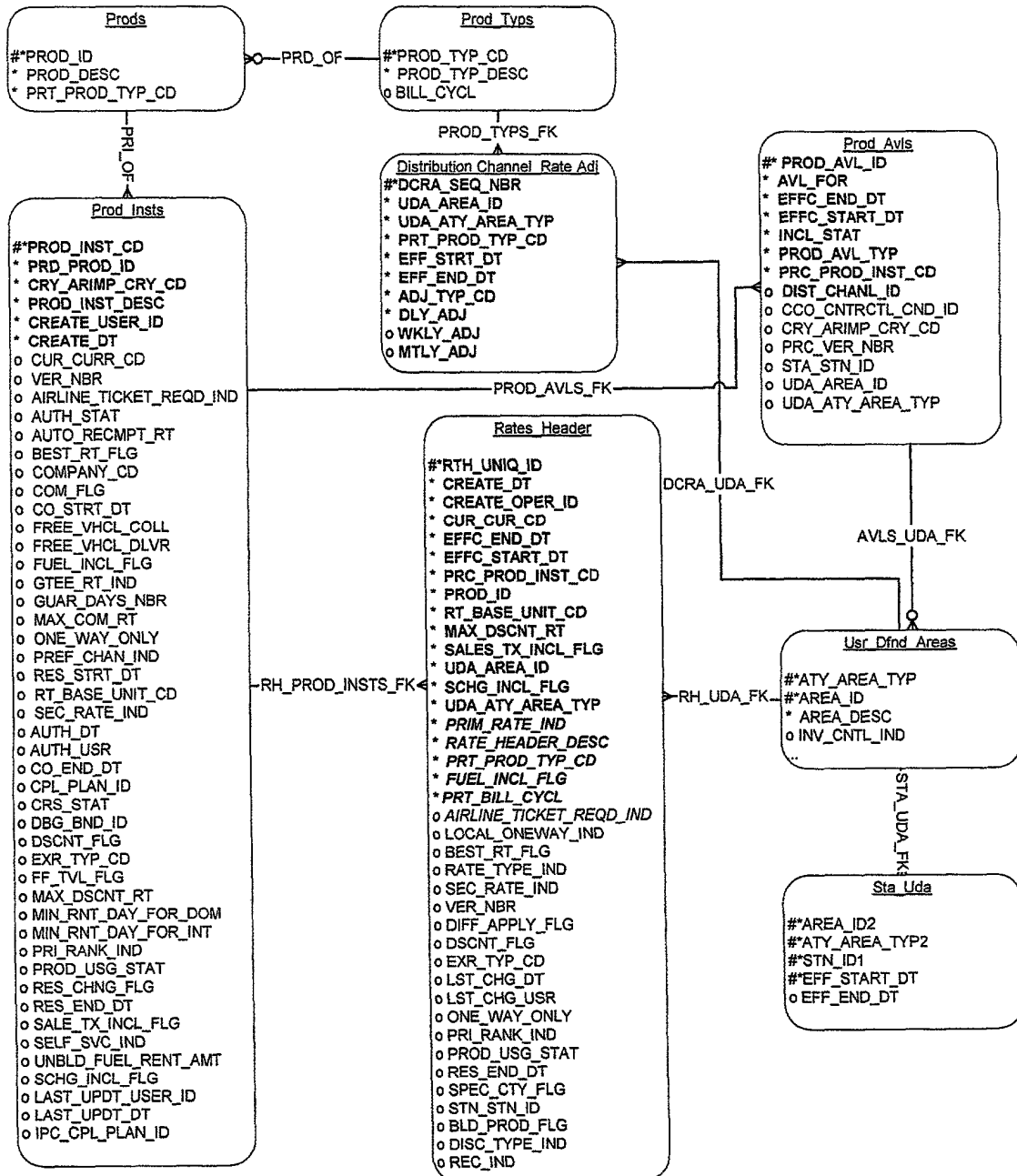
### 5.1 Data Model



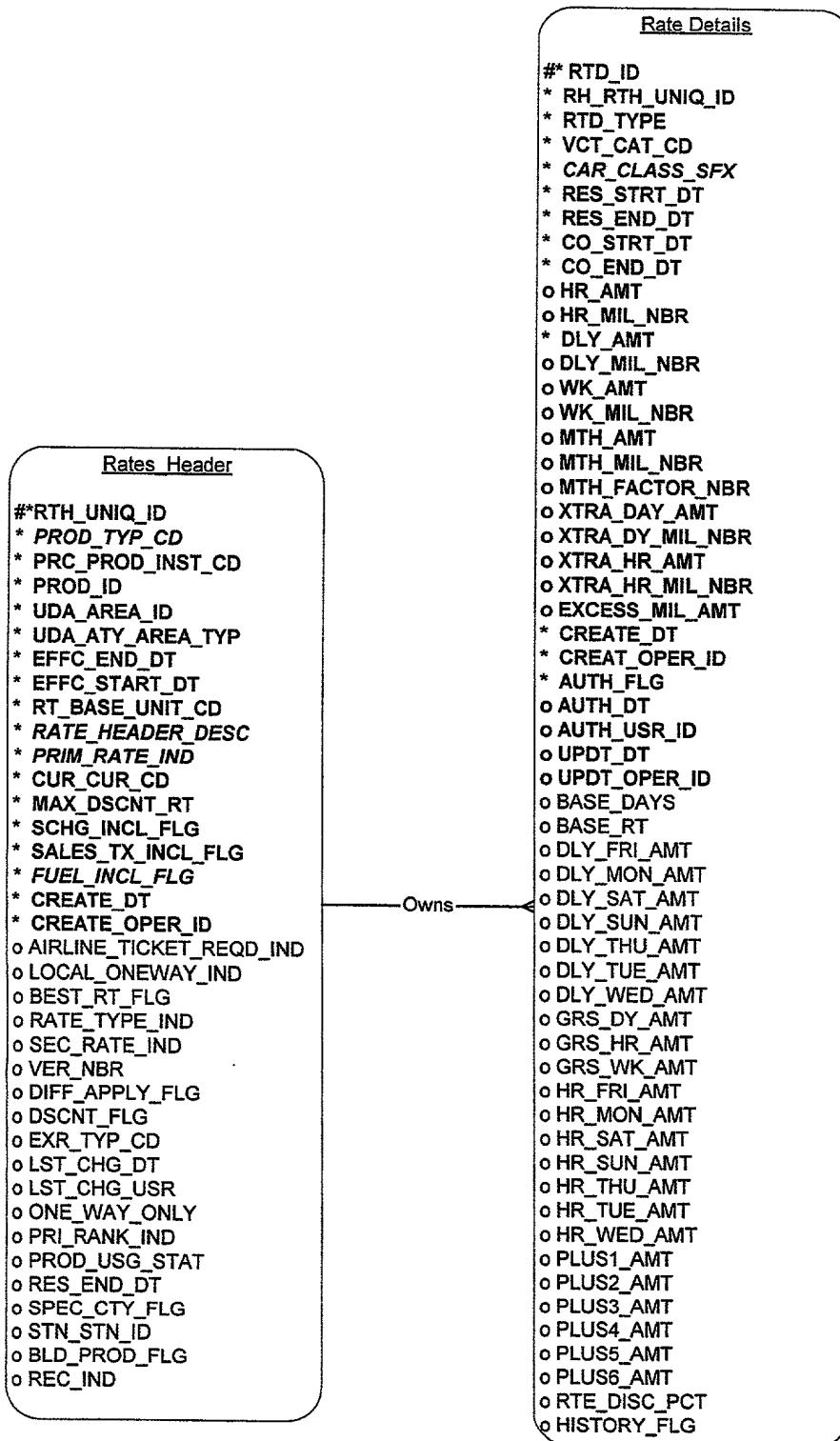
## 5.2 Use Case Diagram



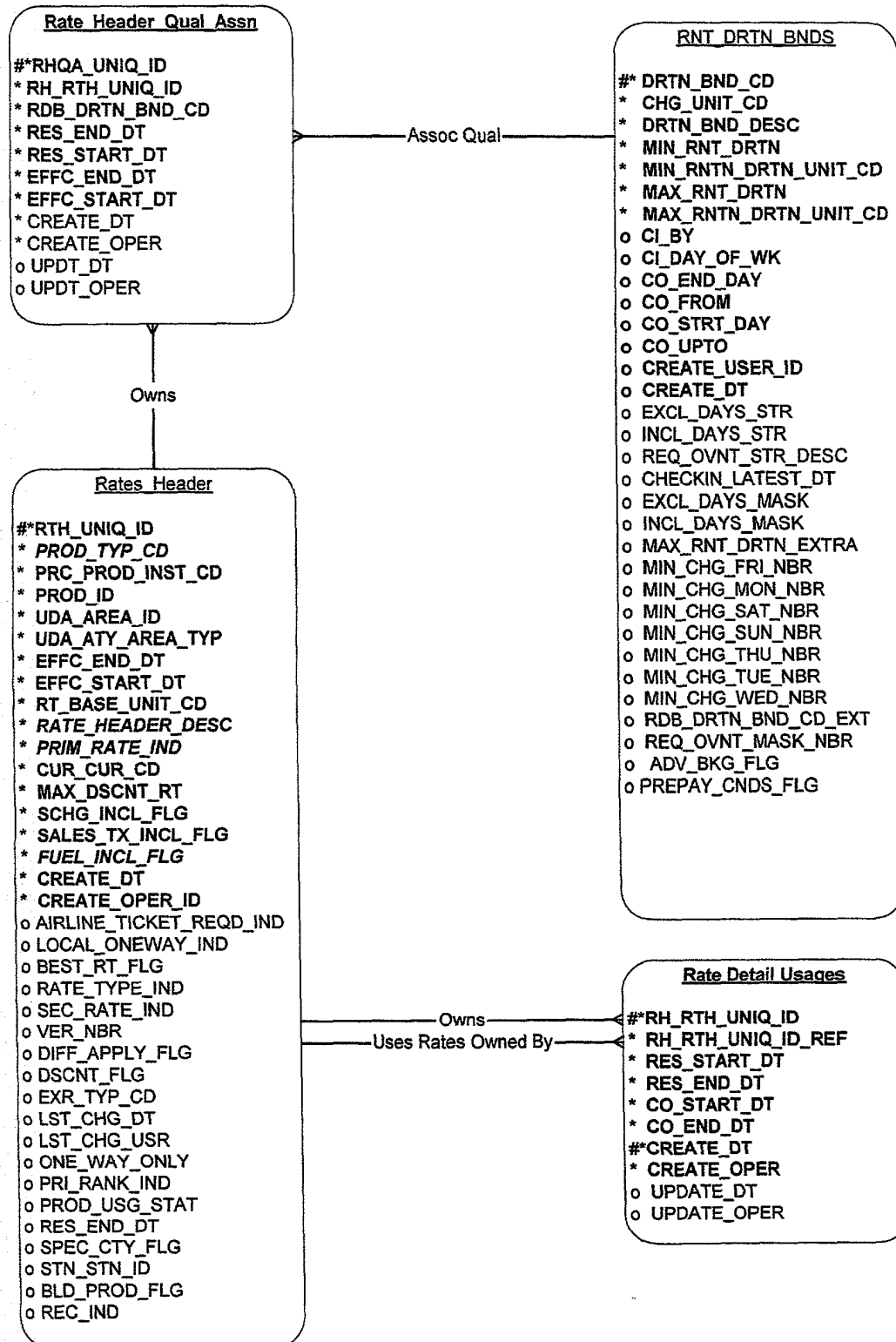
# Product Type, Product Family, Product Instance, Product Availability, User Defined Areas, and Rates Header Relationships



## Rate Header and Rate Detail Relationship



## Rate Header, Rate Header Qual Association, Rate Qual, and Rate Detail Usages Relationships





ECARS V2.0  
Accurate Out the Door Pricing

Detailed Design Specification  
Third Party Tax Rate  
Data Conversion

**perotsystems™**



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## Gaps Addressed Summary

Gap ID	Functional Area	Brief Description
28	Data Conversion - Sales Tax Rates	Develop process(es) to perform initial loading of third party tax rates, supporting the third party's concept of geographic codes to specifically identify a tax district at its lowest level.

## Document Control

### Primary Document Owner/Domain

Issued by: (PSC)

Name	Position/Department	Signature	Date

### Customer Approval

Authorized by: (ERAC)

Name	Position/Department	Signature	Date

## Document History

Version	Date	Author	Reason for Change
1.0	07/10/01	Bill Shannon	Initial Draft
2.0	08/6/01	Bill Shannon	Draft 2
3.0	09/28/01	Bill Shannon	Draft 3
4.0	10/05/01	Bill Shannon	Draft 4 (internal review)
5.0	10/10/01	Bill Shannon	Draft 5 (Enterprise review)
6.0	10/17/01	Bill Shannon	Final

# 1 Introduction

## 1.1 Overview

This document provides detailed design specifications of the processes required to load and maintain third party rental and rental transit tax rates. In addition to the processes required to load and maintain tax rates, a one-time process will be developed to create the database entries required to represent the appropriate jurisdictions and jurisdiction hierarchies with which corresponding tax rates will be associated. These processes are intended to be used for loading and maintaining the rates supplied by a third party vendor, Research Institute of America (RIA). It is anticipated that additional loading and maintenance will be required for rates other than those supplied by RIA and whenever Enterprise chooses to modify the rates or geographic divisions as supplied by RIA.

## 1.2 Dependencies

The processes described in this document are dependent on the use of the current file formats as described in the RIA InSource Sales & Use Tax Rate Update Subscription Service Release Notes dated March 19,2001.

## 1.3 Data Conversion

The initial loading of rental and rental transit tax rates into the database as well as generation of the database entries required to represent the tax jurisdictions and related hierarchies will be accomplished through conversion of RIA rate data in conjunction with existing Enterprise branch data. Initial conversion will require a complete RIA rate file. The initial conversion will load the complete RIA tax data into the database, generate the appropriate tax areas and area hierarchies, and generate the related tax rates. Subsequent executions will load the monthly RIA update data into the database and update the tax rates, but will not perform any area or hierarchy maintenance. Any maintenance required to keep the area and hierarchy definitions synchronized with the RIA data will be handled manually.

It is anticipated that a significant amount of manual intervention will be required to comprehensively maintain all applicable tax rates.

## 1.4 Impact Analysis

This is a data conversion process only and there are no impacts to any functional areas.

## 2 Design Specifications – Tax Rate Data Conversion

### 2.1 Overview

Three batch processes will be developed to read the RIA tax rate file and Enterprise's branch information to create the database entries needed to store applicable rental and rental transit tax rates. The first process will read the RIA file and load the required rate information directly into a database table to facilitate further processing. A second process will read this rate information in conjunction with the branch data and ensure that the appropriate database structures (tax areas, tax area hierarchies, and other supporting information) are built to allow each branch to be associated with the correct rental and rental transit tax rates. The tax areas and area hierarchies will be created once during the initial conversion process. The third process will perform the initial loading of tax rates and maintain them on an on-going basis, based on the rate data supplied by RIA.

Only those rates applicable to an area in which Enterprise operates a branch will be loaded. In this context, an area refers to the appropriate state, county, or city imposing the tax. During the initial conversion, sufficient information will be stored in the database to allow each branch to be associated with specific rates, based on the branch's geographic location.

Individual rates will be loaded at the appropriate level in the geographic hierarchy of areas (also called tax and surcharge user defined areas). For example, state rental and rental transit tax rates will be stored at and associated with the state/province level. All local tax rates will be stored at and associated with the appropriate county or city level. A county will be created in the hierarchy for each county in which Enterprise operates a branch. A city will be created in the hierarchy for each city, having a rental tax or rental transit tax rate greater than zero, in which Enterprise operates a branch. Multiple local rates will be stored at the appropriate level where applicable. For example, if Colorado Springs assesses a 2.1% rental tax in addition to a 1% rental transit tax, both rates would be stored separately at the city level.

A mechanism will be provided to designate specific states for which rates will not be loaded from the RIA file. For example, in Virginia, the tax rate applicable to motor vehicle rentals is 8%, regardless of the Virginia general tax rate of 3.5% or the local jurisdictions' rates. Therefore, the general tax rates in the RIA file would not be applicable to rental car transactions and, as such, Enterprise may not want to load them. In this case, rates applicable to Virginia localities should not be loaded from the RIA file. However, if local tax records are present for a given state in the RIA file, the appropriate tax areas and related hierarchies will be created down to a level (state, county, or city) specified for each state. Continuing the Virginia example, the applicable rate of 8% for Virginia transactions would be established outside of the RIA data conversion process. Numerous other states have similar considerations. Therefore, the states for which tax rates will be taken from the RIA file will be controllable.

The processes described in this document are designed to convert rates provided by RIA. It is anticipated that significant manual maintenance and verification will be required to supplement this process in maintaining a complete set of tax rates applicable to Enterprise's transactions.

## 2.2 Detailed Design Description

### 2.2.1 Read and Store Third Party Rates in the Database

A program will be developed in Pro\*C to load pertinent information from the periodic RIA file into a single database table. A UNIX shell script will be developed to execute the Pro\*C module and perform any other supporting functions (e.g., sorting, file maintenance, etc.). This process will be comprised of the following specific functions:

- Read the periodic RIA ASCII, sequential file.
- For all records on the file, store only the information required by Enterprise. For example, where sales, rental, rental transit, and use rates are provided, only rental and rental transit rates would be stored in the database, since sales and use taxes will not be applicable to Enterprise's transactions.
- Set the add, change, delete indicator for each record loaded into the VNDR\_TAX\_RATE table.
- Set the update applied indicator for each record loaded into the VNDR\_TAX\_RATE table.
- Compress and rename the RIA file to save disk space and indicate that the file has been read and loaded into the database.

### 2.2.2 Build and Assign Initial Hierarchies

A program will be developed to perform conversion of the data loaded into the VNDR\_TAX\_RATE table. A UNIX shell script will be developed to execute the program and perform any other supporting functions (e.g., sorting, file maintenance, passing of parameters, etc.). The conversion process will perform the following specific functions:

- Create the database entries (i.e. areas) required to represent each U.S. taxing jurisdiction having a zip code in which Enterprise operates a branch. Areas will be created for the appropriate group, state, county, or city level. The process will support dynamic specification of the lowest level for which areas will be built for a given state. The lowest level to be built will be specified for each state by Enterprise. Where multiple rates exist for a given county, separate county areas, one for each unique combination of the county and county link code, will be created.
- Link these jurisdictions together, where appropriate, to create complete hierarchies (e.g., group, state, county, city) that can be used to determine the appropriate taxes for a transaction in any given jurisdiction. Hierarchies will include the Enterprise group, thereby allowing each group to maintain its own rates for any jurisdictions in which it operates.

- Create the database entries required to associate each branch with its specific areas and hierarchy. Each branch should be associated with all levels of the hierarchy down to the lowest level specified for the state in which it resides.

The areas and hierarchies used to represent U.S. tax jurisdictions will be created according to the following rules:

For all distinct combinations of U.S. group, state, county, and zip code for active U.S. branches\* in the ofc\_dir\_br table:

- Create a tax and surcharge area for the group if it does not exist in the usr\_dfnd\_areas table.
- Create a tax and surcharge area, under the group, for the state if it does not exist in the usr\_dfnd\_areas table.
- Create a tax and surcharge area, under the group and state, for each county found on an RIA record having the same state and zip code if the area does not exist in the usr\_dfnd\_areas table. In most cases, it will be sufficient to simply use the county from the ofc\_dir\_br row. However, in the case of counties for which multiple rates exist, separate areas will be created for each county/link code combination since link code distinguishes the various parts of the county with different rates. Therefore, the RIA table will be checked to see if more than one rate exist on the RIA file for the associated county. If so, multiple county areas will be created, one for each link code associated with the county.
- Create a tax and surcharge area, under the group, state, and county, for any city found on an RIA record having the matching state, zip code, and county.

\* Active U.S. branches will include those branches associated with a grp\_id between 0 and 69, a grp\_typ\_cde = 'B', a "dr\_br\_typ\_ind" = 'Y', and stat\_cde = 'A'.

The association of each branch to its tax jurisdictions will be made according to the following rules:

For each U.S. branch, create a row in the bil\_tas\_areas table that identifies:

- The group with which the branch is associated
- The state with which the branch is associated
- The county with which the branch is associated, if the matching county is found in a row in the RIA data having the same state and zip code and the hierarchy is to be built to at least the county level for the particular state. In the case of a multi-rate county, the county will be populated in the bil\_tas\_areas row only if a single county/link code combination is associated with the branch's state, zip code, and county.
- The city with which the branch is associated, if all of the following are true:
  1. The branch's mailing city matches either the local taxing jurisdiction or the location name in an RIA record with the same state, county, and zip code. In the case of a multi-rate county, county refers to combination of county and link code.

2. The city rate is  $> 0.0$  or (the city rate = 0 and there are no other RIA records for the city with a rate  $> 0$  in the same state, county, and zip code).
3. The hierarchy is to be built to the city level for the particular state.

If a branch cannot be associated with an RIA record that identifies the lowest level in the hierarchy for the state in which the branch resides, the branch will not be assigned to any levels of the hierarchy (i.e., a `bil_tas_areas` row will be inserted only if the branch can be associated with all appropriate levels of the hierarchy) and an appropriate message will be generated.

### 2.2.3 Load and Maintain RIA Tax Rates

A program will be developed to load and maintain tax rates based on the RIA-supplied data. A UNIX shell script will be developed to execute the program and perform any other supporting functions (e.g., sorting, file maintenance, passing of parameters, etc.). This process will perform the following specific functions:

- Create the database entries required to store the tax rates and associated tax type (i.e., rental or rental transit tax) for branches located in those states that are not specifically excluded. States may be excluded from this portion of the process if the RIA rates are not applicable.
- Compare the current RIA rates to those in the database and update the database if a rate change has taken place. Rates will be updated by populating an end date associated with the old rate and creating a new row with an effective date, but no end date, to store the new rate. A check will be made to ensure that the rate has not been manually changed by Enterprise with the intention of overriding the RIA rate. If the rate has been modified, as indicated by a flag on the tax code (rate) entry in the database, this process will skip the rate update and preserve the manually maintained rate. A rate update will be performed only if a single, active rate of the same type (i.e., rental or rental transit tax) exists for the area or, if more than one exists, the update will take place when only one corresponding rate is not being manually maintained. For example, if two active rental tax rates exist for a given jurisdiction, and both have the flag set to indicate they are being maintained manually, the load process will not apply an update to either rate. However, if only one rate has the flag set, the update would be applied to the rate for which the flag is not set. If a rate has been manually modified and is subsequently set to revert to the RIA rate, the effective date provided by RIA will be used unless it is less than the end date of the manual update, in which case the current date will be used as the effective date. If a delete transaction is received for a particular jurisdiction, and there are no other RIA records for that jurisdiction, the associated tax rate rows in the database will be updated with an end date. If the active rate indicates it is being maintained manually, no update to the end date will be performed (i.e., the rate will not be inactivated by the load process).

## 2.3 Database Table Impacts

The following database table changes are required.

### 2.3.1 VNDR\_TAX\_RATE

This new table will be used to store the required data elements from the complete file or updates-only file as received from RIA. A program will be developed to populate this table from the ASCII file (complete file or monthly updates) received periodically from RIA. The table will be comprised of the following columns:

VNDR_ST_CDE	VARCHAR2(6)
POSTL_ZONE_CDE	VARCHAR2(15)
POSTL_ZONE_POP_SEQ_NBR	VARCHAR2(6)
CNTRY_ISO_CDE	VARCHAR2(6)
CNTRY_SUBDIV_SHRT_NAM	VARCHAR2(12)
LCL_TAX_JURIS_NAM	VARCHAR2(26)
LCL_NAM	VARCHAR2(26)
LCL_RENT_TAX_RATE_AMT	NUMBER(6,4)
LCL_TRANS_RENT_TAX_RATE_AMT	NUMBER(6,4)
LCL_TAX_RATE_EFF_DTE	DATE
CNTY_TAX_JURIS_NAM	VARCHAR2(26)
CNTY_RENT_TAX_RATE_AMT	NUMBER(6,4)
CNTY_TRANS_RENT_TAX_RATE_AMT	NUMBER(6,4)
CNTY_TAX_RATE_EFF_DTE	DATE
COMBINED_RENT_TAX_RATE_AMT	NUMBER(6,4)
LCL_TAX_RATE_XCPT_CDE	VARCHAR2(2)
CNTY_TAX_RATE_XCPT_CDE	VARCHAR2(2)
UPD_APLY_IND	VARCHAR2(1)
CHNG_TYP_IND	VARCHAR2(1)
CNTY_LINK_CDE	VARCHAR2(3)
RECORD_STATUS	VARCHAR2(2)
CREATED_BY	VARCHAR2(30)
CREATE_MODULE	VARCHAR2(1024)
CREATE_TIMESTAMP	DATE
UPDATED_BY	VARCHAR2(30)
UPDATE_MODULE	VARCHAR2(1024)
UPDATE_TIMESTAMP	DATE

### 2.3.2 LRD\_BR\_PROF

The following column will be added to the LRD\_BR\_PROF table.

COUNTY	VARCHAR2(26)
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### 2.3.3 BIL\_TAS\_AREAS

The following changes are required to the BIL\_TAS\_AREAS table.

COUNTY_ID	allow nulls
CITY_ID	allow nulls
DIST_ID	allow nulls

### 2.3.4 TAS\_USR\_DFND\_AREA

A new table, TAS\_USR\_DFND\_AREA (tax and surcharge user defined area locations) will be created with the following columns:

CNTRY_ISO_CDE	VARCHAR2(6)
AREA_ID	VARCHAR2(10)
ATY_AREA_TYP	VARCHAR2(10)
GRP_ID	NUMBER(10)
CNTRY_SUBDIV_SHRT_NAM	VARCHAR2(12)
CNTY_NAM	VARCHAR2(34)
CITY_NAM	VARCHAR2(34)
CREATED_BY	VARCHAR2(30)
CREATE_MODULE	VARCHAR2(1024)
CREATE_TIMESTAMP	DATE
UPDATED_BY	VARCHAR2(30)
UPDATE_MODULE	VARCHAR2(1024)
UPDATE_TIMESTAMP	DATE

Given the general rule that "intelligence" will not be built into database key values, this mechanism will allow each user defined area created for tax and surcharge purposes to be associated with the geographic area(s) it represents. For example, if a tax and surcharge area were created to represent Jefferson County, Missouri, the area id (without any built-in intelligence) might simply be a sequential value such as 0000012345. Other than a text description, there would be no reliable way to programmatically determine which group, state/province, county, or city this area represents.

The new TAS\_USR\_DFND\_AREA table essentially adds these attributes to the user defined areas in lieu of building them into (i.e., placing intelligence in) the area id. Since this table will be used by the tax rate maintenance process to determine whether an area exist for a specific tax jurisdiction, it should be maintained by the forms used to maintain tax and surcharge areas and hierarchies.

### 2.3.5 TX\_CDS

A new column will be added to the TX\_CDS table to indicate that a rate has been modified by the maintenance forms and that the modification is not to be overwritten by the RIA rate load process.

MNL_MAINT_IND	VARCHAR2(1)
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## 2.3.6 Oracle Sequences

A new Oracle Sequence number, UDA\_SEQ\_NBR will be added. This sequence will be used to populate the area\_id column of the USR\_DFND\_AREAS (user defined areas) table when rows are inserted into the table to represent tax jurisdictions. This sequence will start at a value of 1 and increment by 1 each time the next value of the sequence number is used. Note that this sequence number will be used to generate the area id for tax and surcharge areas only (i.e., those with an AREA\_TYP = 'TAS\_GRP', 'TAS\_STPR', 'TAS\_COUN', 'TAS\_COUN', or 'TAS\_DIST').

A new Oracle Sequence number, TXC\_SEQ\_NBR will be added. This sequence will be used to populate the tx\_cd column of the TX\_CDS (tax codes) table when rows are inserted into the table to represent the individual taxes. This sequence will start at a value of 1 and increment by 1 each time the next value of the sequence number is used.

## 2.3.7 List of Excluded States

As part of the maintenance forms development, a new table will be added to allow the rate load and maintenance process to determine whether each state is included or excluded from the process. At minimum, this table will include the following attributes:

CNTRY_SUBDIV_SHRT_NAM	VARCHAR2(12)
INCL_EXCL_IND	VARCHAR2(1)

## 2.4 Inputs

The main inputs to the third party tax rate conversion processes are the RIA tax rate file and Enterprise's branch location information. The primary inputs to each major process are described and discussed below.

### 2.4.1 Read and Store Third Party Rates in the Database

The following inputs will be used by the process that will load the RIA information from a UNIX flat file into an Oracle database table:

#### RIA Sales and Use Tax File (complete file or periodic updates)

This is a fixed-length (528 characters for the complete file, 529 characters for the update file) ASCII file having a single record for each state, and additional records for each local/county jurisdiction. The state records are of the same length as the local/county records, with the state-level rates appearing in the corresponding "local" fields. The "county" fields of the state records are left blank or are filled with zeros. Each record ends with carriage return line feed characters.

Field	Field Description	Starting Position	Field Length
1	State Numerical Code	1	2
2	Zip Code	4	5
3	Population Indicator	10	2
4	Local Taxing Jurisdiction Name	13	26
5	Location Name	40	26
6	Current Local Sales Rate	67	7
7	Current Local Sellers' Use Rate	74	7
8	Current Local Services Rate	81	7
9	Current Local Rental Rate	88	7
10	Current Local Consumers' Use Rate	95	7
11	Current Local Transit Sales Rate	102	7
12	Current Local Transit Sellers Use Rate	109	7
13	Current Local Transit Services Rate	116	7
14	Current Local Transit Rental Rate	123	7
15	Current Local Transit Consumer Use Rate	130	7
16	Current Local Effective Date (mmddyyyy)	138	8
17	County Taxing Jurisdiction	147	26
18	Current County Sales Rate	174	7
19	Current County Sellers' Use Rate	181	7
20	Current County Services Rate	188	7
21	Current County Rental Rate	195	7
22	Current County Consumers' Use Rate	202	7
23	Current County Transit Sales Rate	209	7
24	Current County Transit Sellers Use Rate	216	7
25	Current County Transit Services Rate	223	7

Field	Field Description	Starting Position	Field Length
26	Current County Transit Rental Rate	230	7
27	Current County Transit Consumers Use Rate	237	7
28	Current County Effective Date (mmddyyyy)	245	8
29	Current Combined Sales Rate	253	7
30	Current Combined Sellers Use Rate	260	7
31	Current Combined Services Rate	267	7
32	Current Combined Rental Rate	274	7
33	Current Combined Consumers Use Rate	281	7
34	Prior Local Sales Rate	288	7
35	Prior Local Sellers' Use Rate	295	7
36	Prior Local Services Rate	302	7
37	Prior Local Rental Rate	309	7
38	Prior Local Consumers' Use Rate	316	7
39	Prior Local Transit Sales Rate	323	7
40	Prior Local Transit Sellers Use Rate	330	7
41	Prior Local Transit Services Rate	337	7
42	Prior Local Transit Rental Rate	344	7
43	Prior Local Transit Consumers Use Rate	351	7
44	Prior Local Effective Date (mmddyyyy)	359	8
45	Prior County Sales Rate	367	7
46	Prior County Sellers' Use Rate	374	7
47	Prior County Services Rate	381	7
48	Prior County Rental Rate	388	7
49	Prior County Consumers' Use Rate	395	7
50	Prior County Transit Sales Rate	402	7
51	Prior County Transit Sellers Use Rate	409	7
52	Prior County Transit Services Rate	416	7
53	Prior County Transit Rental Rate	423	7
54	Prior County Transit Consumers Use Rate	430	7
55	Prior County Effective Date (mmddyyyy)	438	8
56	Prior Combined Sales Rate	446	7
57	Prior Combined Sellers Use Rate	453	7
58	Prior Combined Services Rate	460	7
59	Prior Combined Rental Rate	467	7
60	Prior Combined Consumers Use Rate	474	7
61	County Link Code	482	3
62	Local Exception Code	486	2
63	County Exception Code	489	2
64	Local Indicator	492	1
65	County Indicator	494	1
66	Local Transit Code	496	2
67	County Transit Code	499	2
68	Local Locally Administered Code	502	1
69	County Locally Administered Code	504	1
70	Local Tax Code	506	10
71	County Tax Code	517	10
72	Carriage Return Character	527	1
73	Line Feed Character	528	1

The record layout for the update file differs slightly from the complete file in that there is an additional field, the add/change/delete indicator, as shown below:

Field	Field Description	Starting Position	Field Length
72	Add, Change, Delete Indicator	527	1
73	Carriage Return Character	528	1
74	Line Feed Character	529	1

## CNTRY\_SUBDIV

This table will be read to facilitate conversion of the two character numeric state code used by RIA to the two character alphabetic code used by Enterprise.

## Program Parameters

The read and store third party rates process will require a command line argument (parameter) to obtain the name of the RIA file to be processed. The script that executes this process will automatically determine the name of the file to be processed, provided it is located in the appropriate directory and is named according the currently specified RIA standards, and pass it as a parameter to the program that will perform the required processing.

## Environment Variables

The read and store third party rates process will require a UNIX environment variable, UN\_PW, to obtain the userid and password (in the form userid/password) required to log on to the appropriate database. This variable must be set and exported prior to submitting the script that runs this process.

## 2.4.2 Build and Assign Initial Hierarchies

The following inputs will be used by the process that will build the initial tax jurisdiction areas and hierarchies and make the initial assignment of branches to appropriate hierarchies:

### OFC\_DIR\_GRP

This table will be read in combination with the ofc\_dir\_br table to obtain information about the appropriate group and branches for which tax jurisdiction areas will need to be built. This information will be used in conjunction with the RIA tax data to determine whether there are applicable state and local rental and rental transit taxes, based on the branches' locations.

### OFC\_DIR\_BR

This table will be read to obtain basic branch information such as branch id and location information such as state, county, city, and zip code. This information will be used in conjunction with the RIA

tax data to determine whether there are applicable state and local rental and rental transit taxes, based on the branches' locations.

### **LRD\_IORG**

This table will be read to determine the PeopleSoft id associated with each branch. The PeopleSoft id will be used when inserting a row into the STN\_CNTR table as each branch is assigned to its respective area hierarchy.

### **LRD\_BR\_PROF**

This table will be read to determine the county associated with each branch. The county will be used in conjunction with the RIA data to determine the appropriate county areas to build.

### **VNDR\_TAX\_RATE**

This new table will be used to store, in a database format, required data elements from the RIA tax rate file. This will facilitate retrieval of the data based on selection and sort criteria. In addition, it will facilitate the ongoing maintenance of RIA tax rates in that the process used to load this table from the RIA file could be designed to apply add, update, and delete transactions from the available updates-only file, thereby maintaining a complete, current set of RIA rates readily available in the database.

### **List of States and Associated Hierarchy Levels**

A hierarchy level indicating the lowest level for which the tax jurisdiction areas will be specified for each state. Since this information will be used only by the process to build and assign branches to the initial hierarchies, it will be supplied in the form of a UNIX flat file rather than a permanent database table. The name of the file will be passed as a command line argument (parameter) to the program that will build and assign the tax hierarchies.

A record for each state should be present in this file. The absence of a valid record for a given state will cause the level to default to 0, indicating that no hierarchies are to be build as a result of branches in that state.

The record format will be as follows:

Field Name	Pos.	Notes
State Code	1-2	Country Subdivision Code (e.g., 'AL')
Blank	3	Should be blank
Hierarchy Level	4	Lowest level to which the hierarchy should be built for the state 0 = no areas will be created 1 = group 2 = state 3 = county 4 = city

For example, to build the hierarchy to the city level for Alabama the appropriate record would be :  
"AL 4".

### Program Parameters

The build and assign initial hierarchies process will require a command line argument (parameter) to obtain the name of the file containing the list of states and associated hierarchy levels. The script that executes this process will require this information as a command line parameter and pass it to the program that will perform the required processing.

### Environment Variables

The build and assign initial hierarchies process will require a UNIX environment variable, UN\_PW, to obtain the userid and password (in the form userid/password) required to log on to the appropriate database. This variable must be set and exported prior to submitting the script that runs this process.

## 2.4.3 Load and Maintain RIA Tax Rates

The following inputs will be used by the process that will load and maintain RIA-supplied tax rates:

### VNDR\_TAX\_RATE

This new table will be used to store, in a database format, required data elements from the RIA tax rate file. This will facilitate retrieval of the data based on selection and sort criteria. In addition, it will facilitate the ongoing maintenance of RIA tax rates in that the process used to load this table from the RIA file could be designed to apply add, update, and delete transactions from the available updates-only file, thereby maintaining a complete, current set of RIA rates readily available in the database.

## TAS\_USR\_DFND\_AREA

This table will effectively add the group id, state/province code, county name, and city name as attributes to the tax and surcharge areas. The build and assign initial hierarchies process will insert one row into this table for each tax and surcharge area it creates. The load and maintain RIA tax rates process will use this table to determine whether the taxing jurisdiction area exists for each rate to be maintained. If the associated area does not exist in the database, maintenance for the rate will be skipped and a message written to an exception file.

## TX\_CDS

Although this is the primary output of the load and maintain RIA rates process, it is also an input used to determine the type of update required, if any. If no row corresponding to the RIA rate exists in this table, it will be inserted. If the corresponding row exists and the rate matches that of the RIA rate being processed, no update is required. If the row exists but the rate is different, the rate in this table will be updated to reflect the new RIA rate provided the manual maintenance indicator is not set to 'Y'.

## List of States to Exclude from the Load Process

The states to be excluded from the tax rate load and maintenance process (i.e., those for which RIA rates will not be used) will be stored by the maintenance forms in a database table. The load and maintain RIA rates process will use this table to determine whether to load and maintain the RIA-supplied rates for each state. The table name and specific details have not been determined.

## Environment Variables

The load and maintain RIA tax rates process will require a UNIX environment variable, UN\_PW, to obtain the userid and password (in the form userid/password) required to log on to the appropriate database. This variable must be set and exported prior to submitting the script that runs this process.



## 2.5 Outputs

The main outputs of the third party tax rate conversion processes are areas and hierarchies representing the taxing jurisdictions common to the RIA data and Enterprise's branch locations, the database entries needed to associate branches with their respective hierarchies, and current third party tax rates in the database. The primary outputs of each major process are described and discussed below.

### 2.5.1 Read and Store Third Party Rates in the Database

#### **VNDR\_TAX\_RATE**

This new table will be used to store, in a database format, required data elements from the RIA tax rate file. This will facilitate retrieval of the data based on selection and sort criteria. In addition, it will facilitate the ongoing maintenance of RIA tax rates in that the process used to load this table from the RIA file could be designed to apply add, update, and delete transactions from the available updates-only file, thereby maintaining a complete, current set of RIA rates readily available in the database.

#### **Log File**

A log file will be generated by the read and store third party rates in the database process to provide basic processing information such as start and end time, any informational messages, and an indication of successful completion.

#### **Error File**

An error file will be generated by the read and store third party rates in the database process to provide information about any errors that occur during processing.

### 2.5.2 Build and Assign Initial Hierarchies

#### **USR\_DFND\_AREAS**

For tax purposes, this table is used to represent the geographic areas in which a branch is located. The load process will insert a row into this table for each geographic area in which a branch (or counter) is located for tax purposes. For example, if a branch is located in the state of Illinois, Cook County, and the city of Chicago, a row must be inserted for each of these areas if the row does not exist. Continuing the example, if rows have previously been inserted, for Illinois, and Cook county, then only the city-level row for Chicago would be inserted.

## TAS\_USR\_DFND\_AREA

This table will effectively add the group id, state/province code, county name, and city name as attributes to the tax and surcharge areas. The load process will insert one row into this table for each tax and surcharge area it creates.

## AREA\_RLTNS

Hierarchies of areas are established through rows in the AREA\_RLTNS table. For example, the relationships between Group 15, Illinois, Cook County, and Chicago would be established through rows in this table. Group 15 would be established as the parent of Illinois, Illinois the parent of Cook County, Cook County a parent of Chicago, thereby creating a hierarchy ordered from most general to most specific geographic area.

## BIL\_TAS\_AREAS

This table is used by the tax engine to obtain the tax area ids applicable to a given branch. The load process will insert a row into this table for each branch.

## STN\_CNTR

This table provides a mechanism to allow for a single branch (known as a station in VRS) to have counters in more than one geographic area. Prior to the initial conversion of RIA tax rates, this table will be empty. One row will be inserted into this table by the load process for each branch. The station id will be populated with the unique PeopleSoft branch id. The area id will be populated with area id of the lowest level of the hierarchy (state, county, or city) associated with the branch. The area type will be populated with "TAS\_STPR" (tax and surcharge area - state), "TAS\_COUN" (tax and surcharge area - county), or "TAS\_CITY" (tax and surcharge areas - city) based on the hierarchy level associated with the area\_id.

## Log File

A log file will be generated by the build and assign initial hierarchies process to provide basic processing information such as start and end time, any informational messages, and an indication of successful completion.

## Error File

An error file will be generated by the build and assign initial hierarchies process to provide information about any errors that occur during processing.

## Summary Reports

Various reports will be required to summarize the results of the tax rate conversion and maintenance processes and support on-going manual maintenance of related tax rates. A separate design document will be prepared to address any reporting requirements.

### 2.5.3 Load and Maintain RIA Tax Rates

#### TX\_CDS

This table is used by the tax engine to retrieve the appropriate tax rates for a given area. This is the final destination for the RIA rates loaded by the processes described in this document. Once the country, state/province, county, city, and district area ids are known for a given branch, all applicable taxes (except those implemented as surcharges) for those areas can be obtained from this table. The load process will insert a row into the TX\_CDS table when no row exists for the rate being processed. The process will update the end date on an existing row and insert a row with the new rate if the corresponding rate for the area has changed and the rate is not being manually maintained. If a rate is deleted or changed to 0% in the RIA data, the corresponding row in the TX\_CDS table will not be deleted. Instead, the load process will set the inactive date to the effective date of the change.

#### Log File

A log file will be generated by the load and maintain RIA tax rates process to provide basic processing information such as start and end time, any informational messages, and an indication of successful completion.

#### Error File

An error file will be generated by the load and maintain RIA tax rates process to provide information about any errors that occur during processing.

## 2.6 Detailed Table/Column Mapping

The following table maps the individual fields of the RIA file to their respective columns in the VNDR\_TAX\_RATE table.

RIA FIELD NAME	USAGE	VNDR TAX RATE COLUMN NAME
RIA FILE: State Numerical Code	Stored directly	VNDR TAX RATE.VNDR ST CDE
RIA FILE: Zip Code	Stored directly	VNDR TAX RATE.POSTL_ZONE CDE
RIA FILE: Population Indicator	Stored directly	VNDR TAX RATE.POSTL_ZONE_POP_SEQ_NBR
RIA FILE: Local Taxing Jurisdiction Name	Stored directly	VNDR TAX RATE.LCL TAX JURIS_NAM
RIA FILE: Location Name	Stored directly	VNDR TAX RATE.LCL TAX JURIS_NAM
RIA FILE: Current Local Sales Rate	Not used	
RIA FILE: Current Local Sellers' Use Rate	Not used	
RIA FILE: Current Local Services Rate	Not used	
RIA FILE: Current Local Rental Rate	Stored directly	VNDR TAX RATE.LCL RENT TAX RATE_AMT
RIA FILE: Current Local Consumers' Use Rate	Not used	
RIA FILE: Current Local Transit Sales Rate	Not used	
RIA FILE: Current Local Transit Sellers' Use Rate	Not used	
RIA FILE: Current Local Transit Services Rate	Not used	
RIA FILE: Current Local Transit Rental Rate	Stored directly	VNDR TAX RATE.LCL TRANS RENT TAX RATE_AMT
RIA FILE: Current Local Transit Consumer Use Rate	Not used	
RIA FILE: Current Local Effective Date (mmddyyyy)	Stored directly	VNDR TAX RATE.LCL TAX RATE EFF DTE
RIA FILE: County Taxing Jurisdiction	Stored directly	VNDR TAX RATE.CNTY TAX JURIS_NAM
RIA FILE: Current County Sales Rate	Not used	
RIA FILE: Current County Sellers' Use Rate	Not used	
RIA FILE: Current County Services Rate	Not used	
RIA FILE: Current County Rental Rate	Stored directly	VNDR TAX RATE.CNTY RENT TAX RATE_AMT
RIA FILE: Current County Consumers' Use Rate	Not used	
RIA FILE: Current County Transit Sales Rate	Not used	
RIA FILE: Current County Transit Sellers' Use Rate	Not used	
RIA FILE: Current County Transit Services Rate	Not used	
RIA FILE: Current County Transit Rental Rate	Stored directly	VNDR TAX RATE.CNTY TRANS RENT TAX RATE_AMT
RIA FILE: Current County Transit Consumers' Use Rate	Not used	
RIA FILE: Current County Effective Date (mmddyyyy)	Stored directly	VNDR TAX RATE.CNTY TAX RATE EFF DTE
RIA FILE: Current Combined Sales Rate	Not used	
RIA FILE: Current Combined Sellers' Use Rate	Not used	
RIA FILE: Current Combined Services Rate	Not used	
RIA FILE: Current Combined Rental Rate	Stored directly	VNDR TAX RATE.COMBINED RENT TAX RATE_AMT
RIA FILE: Current Combined Consumers' Use Rate	Not used	
RIA FILE: Prior Local Sales Rate	Not used	
RIA FILE: Prior Local Sellers' Use Rate	Not used	
RIA FILE: Prior Local Services Rate	Not used	
RIA FILE: Prior Local Rental Rate	Not used	
RIA FILE: Prior Local Consumers' Use Rate	Not used	
RIA FILE: Prior Local Transit Sales Rate	Not used	

RIA FIELD NAME	USAGE	VRS TABLE COLUMN NAME
RIA FILE: Prior Local Transit Sellers Use Rate	Not used	
RIA FILE: Prior Local Transit Services Rate	Not used	
RIA FILE: Prior Local Transit Rental Rate	Not used	
RIA FILE: Prior Local Transit Consumers Use Rate	Not used	
RIA FILE: Prior Local Effective Date (mmddyyyy)	Not used	
RIA FILE: Prior County Sales Rate	Not used	
RIA FILE: Prior County Sellers' Use Rate	Not used	
RIA FILE: Prior County Services Rate	Not used	
RIA FILE: Prior County Rental Rate	Not used	
RIA FILE: Prior County Consumers' Use Rate	Not used	
RIA FILE: Prior County Transit Sales Rate	Not used	
RIA FILE: Prior County Transit Sellers Use Rate	Not used	
RIA FILE: Prior County Transit Services Rate	Not used	
RIA FILE: Prior County Transit Rental Rate	Not used	
RIA FILE: Prior County Transit Consumers Use Rate	Not used	
RIA FILE: Prior County Effective Date (mmddyyyy)	Not used	
RIA FILE: Prior Combined Sales Rate	Not used	
RIA FILE: Prior Combined Sellers Use Rate	Not used	
RIA FILE: Prior Combined Services Rate	Not used	
RIA FILE: Prior Combined Rental Rate	Not used	
RIA FILE: Prior Combined Consumers Use Rate	Not used	
RIA FILE: County Link Code	Stored directly	VNDR TAX RATE: CNTY LINK CDE
RIA FILE: Local Exception Code	Stored directly	VNDR TAX RATE: LCL TAX RATE XCPT CDE
RIA FILE: County Exception Code	Stored directly	VNDR TAX RATE: CNTY TAX RATE XCPT CDE
RIA FILE: Local Indicator	Not used	
RIA FILE: County Indicator	Not used	
RIA FILE: Local Transit Code	Not used	
RIA FILE: County Transit Code	Not used	
RIA FILE: Local Locally Administered Code	Not used	
RIA FILE: County Locally Administered Code	Not used	
RIA FILE: Local Tax Code	Not used	
RIA FILE: County Tax Code	Not used	
RIA FILE: Add, Change, Delete Indicator	Stored directly	VNDR TAX RATE
RIA FILE: Carriage Return Character	Not used	
RIA FILE: Line Feed Character	Not used	

The following table shows the source of data and related population rules for those tables and columns that will be populated by the conversion process.

VRS TABLE	VRS COLUMN	DATA TYPE	MANDATORY	SOURCE DATA / POPULATION RULES
VNDR TAX RATE	VNDR ST CDE	Varchar2(6)	Y	RIA FILE.State Numerical Code
	POSTL_ZONE_CDE	Varchar2(15)	Y	RIA FILE.Zip Code
	POSTL_ZONE_POP_SEQ_NBR	Varchar2(6)	Y	RIA FILE.Population Indicator
	CNTRY_ISO_CDE	Varchar2(6)	Y	'USA'
	CNTRY_SUBDIV_SHRT_NAM	Varchar2(12)	Y	CNTRY_SUBDIV_CNTRY_SUBDIV_SHRT_NAM where CNTRY_SUBDIV_CNTRY_ISO_CDE = 'USA' and CNTRY_SUBDIV_CNTRY_SUBDIV_DSC = RIA FILE.Local Taxing Jurisdiction Name and RIA FILE.Zip Code = '00000'
	LCL TAX JURIS_NAM	Varchar2(26)		RIA FILE.Local Taxing Jurisdiction Name
	LCL_NAM	Varchar2(26)		RIA FILE.Location Name
	LCL_RENT_TAX_RATE_AMT	Number(6,4)		RIA FILE.Current Local Rental Rate
	LCL_TRANS_RENT_TAX_RATE_AMT	Number(6,4)		RIA FILE.Current Local Transit Rental Rate
	LCL_TAX_RATE_EFF_DTE	Date		RIA FILE.Current Local Effective Date
	CNTRY_TAX JURIS_NAM	Varchar2(26)		RIA FILE.County Taxing Jurisdiction
	CNTRY_RENT_TAX_RATE_AMT	Number(6,4)		RIA FILE.Current County Rental Rate
	CNTRY_TRANS_RENT_TAX_RATE_AMT	Number(6,4)		RIA FILE.Current County Transit Rental Rate
	CNTRY_TAX_RATE_EFF_DTE	Date		RIA FILE.Current County Effective Date
	CMBND_RENT_TAX_RATE_AMT	Number(6,4)		RIA FILE.Current Combined Rental Rate
	LCL_TAX_RATE_XCPT_CDE	Varchar2(2)		RIA FILE.Local Exception Code
	CNTRY_TAX_RATE_XCPT_CDE	Varchar2(2)		RIA FILE.County Exception Code
	UPD_APLY_IND	Varchar2(1)		'N'
	CHNG_TYP_IND	Varchar2(1)		'A' during initial load, otherwise use RIA FILE.Add, Change, Delete Indicator
	CNTRY_LINK_CDE	Varchar2(3)		RIA FILE.County Link Code
	RECORD_STATUS	Varchar2(2)		Null
	CREATED_BY	Varchar2(30)		Oracle user id used by the program to log into the database.
	CREATE_MODULE	Varchar2(1024)		'BILB0001'
	CREATE_TIMESTAMP	Date		System date and time as of the time the program was started.
	UPDATED_BY	Varchar2(30)		Null
	UPDATE_MODULE	Varchar2(1024)		Null
	UPDATE_TIMESTAMP	Date		Null
USR_DFND_AREAS	ATY_AREA_TYP	Varchar2(10)	Y	'TAS_GRP', 'TAS_STPR', 'TAS_COUN', or 'TAS_CITY' for rows representing groups, states, counties, or cities respectively.
	AREA_ID	Varchar2(10)	Y	The next value from the Oracle sequence number, UDA_SEQ_NBR, will be used.
	AREA_DESC	Varchar2(35)	Y	'GROUP XX' (where XX is the PeopleSoft group id) for rows representing groups, VNDR_TAX_RATE.LCL_TAX_JURIS_NAM for rows representing states or cities, or VNDR_TAX_RATE. CNTRY_TAX_JURIS_NAM for rows representing counties.
	INV_CNTRL_IND	Varchar2(1)		Null
	VPA_VPA_ID	Number(8)		Null
	CITY_ALIAS_FLG	Varchar2(1)		Null

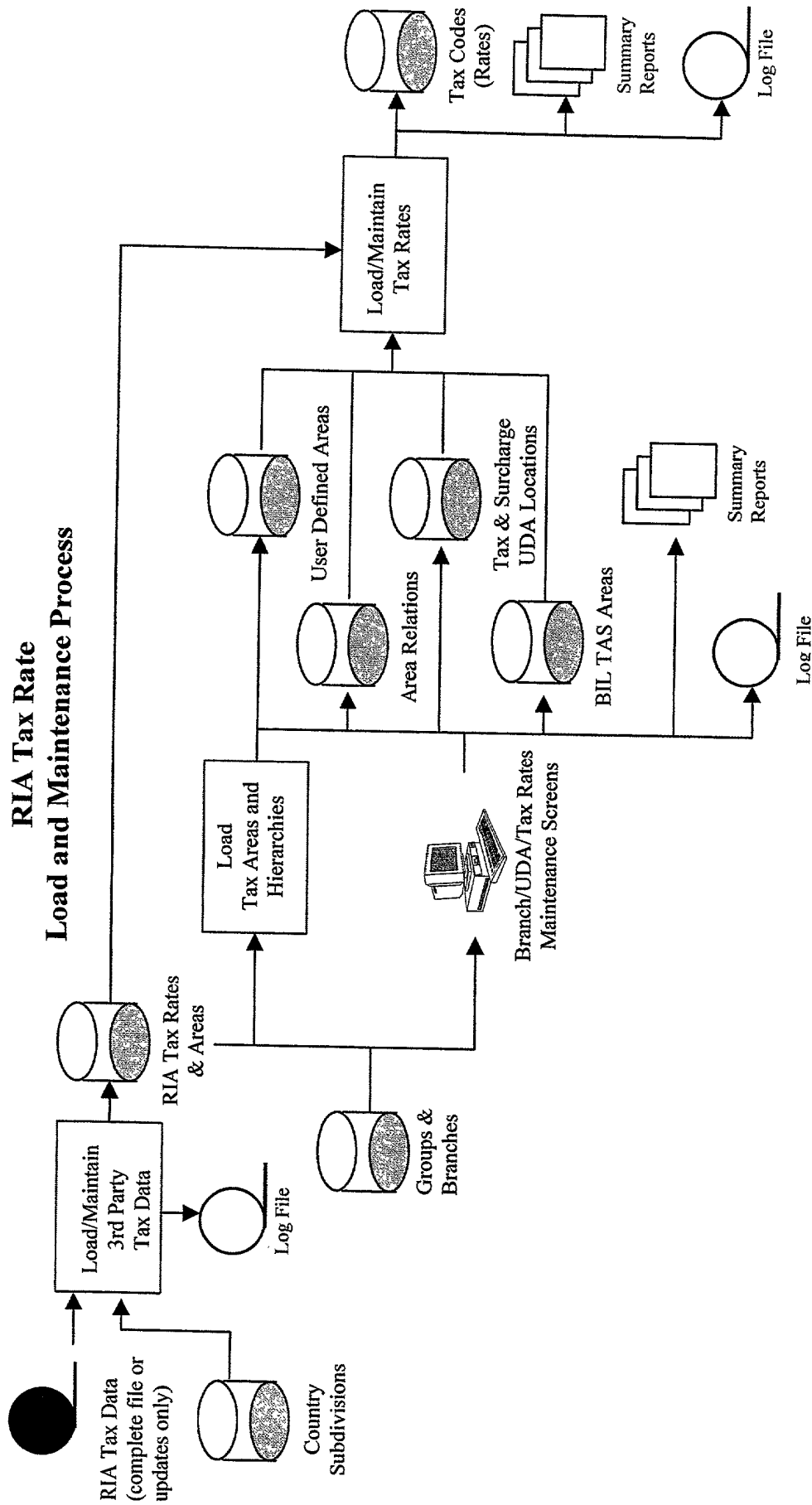
VRS TABLE	VRS COLUMN	DATA TYPE	MANDATORY	SOURCE DATA / POPULATION RULES
TAS_USR_DFND_AREA	CNTRY_ISO_CDE ATY_AREA_TYP	Varchar2(6) Varchar2(10)	Y	'USA' 'TAS_GRP', 'TAS_STPR', 'TAS_COUN', or 'TAS_CITY' for rows representing groups, states, counties, or cities respectively.
	CNTRY_SUBDIV_SHRT_NAM GRP_ID	Varchar2(12) Varchar2(10)	Y	VNDR_TAX_RATE_CNTRY_SUBDIV_SHRT_NAM LRD_IORG_PS_ORG_ID where IORG_TYP_DSC = 'Group' and IORG_ID = the legacy group id associated with the branch)
	AREA_ID	Varchar2(10)	Y	USR_DFND_AREAS.AREA_ID of the row representing the same area represented by this TAS_USR_DFND_AREA row.
	CNTY_NAM	Varchar2(34)		VNDR_TAX_RATE_CNTRY_TAX_JURIS_NAM
	CITY_NAM	Varchar2(34)		VNDR_TAX_RATE_LCL_TAX_JURIS_NAM
	CREATED_BY	Varchar2(30)		Oracle user id used by the program to log into the database.
	CREATE_MODULE	Varchar2(1024)		'BILB0002'
	CRTE_TMSTMP	Date		System date and time as of the time the program was started.
	UPDATED_BY	Varchar2(30)		Null
	UPDATE_MODULE	Varchar2(1024)		Null
	UPDATE_TIMESTAMP	Date		Null
AREA_RLTNS	UDA_ATY_AREA_TYP_PRNT	Varchar2(10)	Y	USR_DFND_AREAS.ATY_AREA_TYP of the row representing the area that is geographically above the area for which this row is being inserted.
	UDA_ATY_AREA_TYP_CHLD	Varchar2(10)	Y	USR_DFND_AREAS.ATY_AREA_TYP of the row representing the area for which this row is being inserted.
	UDA_AREA_ID_PRNT	Varchar2(10)	Y	USR_DFND_AREAS.AREA_ID of the row representing the area that is geographically above the area for which this row is being inserted.
	UDA_AREA_ID_CHLD	Varchar2(10)	Y	USR_DFND_AREAS.AREA_ID of the row representing the area for which this row is being inserted.
	RECORD_STATUS	Varchar2(2)		Null
	CREATED_BY	Varchar2(30)	Y	Oracle user id used by the program to log into the database.
	CREATE_MODULE	Varchar2(1024)		'BILB0002'
	CREATE_TIMESTAMP	Date		System date and time as of the time the program was started.
	UPDATED_BY	Varchar2(30)		Null
	UPDATE_MODULE	Varchar2(1024)		Null
	UPDATE_TIMESTAMP	Date		Null
BIL_TAS_AREAS	STN_STN_ID	Varchar2(10)	Y	LRD_IORG_PS_ORG_ID where IORG_TYP_DSC = 'Branch' and IORG_ID = 'GGBBB' (where GG is the legacy group id associated with the branch and BBB is the legacy branch id).
	SCNTR_STN_CNTR_ID CITY_ID	Varchar2(1) Varchar2(10)	Y	'1' (one) USR_DFND_AREAS.AREA_ID of the row representing the city in which the branch represented by this BIL_TAS_AREAS row is located or Null if the branch is not associated with an area at this level.
	COUN_ID	Varchar2(10)		USR_DFND_AREAS.AREA_ID of the row representing the county in which the branch represented by this BIL_TAS_AREAS row is located or Null if the branch is not associated with an area at this level.
	CRY_ARIMP_CRY_CD	Varchar2(2)	Y	'US'

VRS TABLE	VRS COLUMN	DATA TYPE	MANDATORY	SOURCE DATA / POPULATION RULES
	DIST_ID	Varchar2(10)		Null
	STPR_ID	Varchar2(10)	Y	USR_DFND_AREAS.AREA_ID of the row representing the state in which the branch represented by this BIL_TAS_AREAS row is located.
	BIL_TAS_AREAS_EFF_DTE	Date	Y	System date and time as of the time the program was started.
	BIL_TAS_AREAS_XPR_DTE	Date		Null
	RECORD_STATUS	Varchar2(2)		Null
	CREATED_BY	Varchar2(30)	Y	Oracle user id used by the program to log into the database.
	CREATE_MODULE	Varchar2(1024)		'BILB0002'
	CREATE_TIMESTAMP	Date		System date and time as of the time the program was started.
	UPDATED_BY	Varchar2(30)		Null
	UPDATE_MODULE	Varchar2(1024)		Null
	UPDATED_TIMESTAMP	Date		Null
	GRP_ID	Varchar2(10)	Y	USR_DFND_AREAS.AREA_ID of the row representing the group in which the branch represented by this BIL_TAS_AREAS row is located.
TX_CDS	TX_CD	Varchar2(15)	Y	The next value from the Oracle sequence number, TXC_SEQ_NBR will be used.
	STRT_DT	Date	Y	VNDR_TAX_RATE.LCL_TAX_RATE.EFF_DTE for state and city tax rates or VNDR_TAX_RATE.CNTY_TAX_RATE.EFF_DTE for county rates.
	CREAT_BY	Varchar2(30)	Y	'BILB0003'
	CREAT_DT	Date	Y	System date and time as of the time the program was started.
	CRY_ARIMP_CRY_CD	Varchar2(2)	Y	'US'
	EXMPT_IND	Varchar2(1)	Y	'Y'
	TX_NM	Varchar2(35)	Y	'RENTAL TAX' or 'RENTAL TRANSIT TAX' depending on whether a rental rate (VNDR_TAX_RATE.LCL_RENT_TAX_RATE_AMT or VNDR_TAX_RATE.CNTY_RENT_TAX_RATE_AMT) or rental transit rate (VNDR_TAX_RATE.LCL_TRANS_RENT_TAX_RATE_AMT or VNDR_TAX_RATE.CNTY_TRANS_RENT_TAX_RATE_AMT) is being loaded.
	TX_RT	Number(6,3)	Y	VNDR_TAX_RATE.LCL_RENT_TAX_RATE_AMT, VNDR_TAX_RATE.CNTY_RENT_TAX_RATE_AMT, VNDR_TAX_RATE.LCL_TRANS_RENT_TAX_RATE_AMT, or VNDR_TAX_RATE.LCL_TRANS_RENT_TAX_RATE_AMT depending on the type of tax being loaded.
	UDA_AREA_ID	Varchar2(10)	Y	USR_DFND_AREAS.AREA_ID of the row representing the area for which the tax rate represented by this TX_CDS row applies
	UDA_ATY_AREA_TYP	Varchar2(10)	Y	'TAS_STPR', 'TAS_COUN', or 'TAS_CITY' for rows representing states, counties, or cities respectively.
	CR_CHG_DESC	Varchar2(35)		'RENTAL TAX' or 'RENTAL TRANSIT TAX' depending on whether a rental rate (VNDR_TAX_RATE.LCL_RENT_TAX_RATE_AMT or VNDR_TAX_RATE.CNTY_RENT_TAX_RATE_AMT) or rental transit rate (VNDR_TAX_RATE.LCL_TRANS_RENT_TAX_RATE_AMT or VNDR_TAX_RATE.CNTY_TRANS_RENT_TAX_RATE_AMT) is being loaded.



VRS TABLE	VRS COLUMN	DATA TYPE	MANDATORY	SOURCE DATA / POPULATION RULES
	GLT_SEQ	Number(6)		being loaded.
	INACTV_DT	Date		Null
				VNDR_TAX_RATE.LCL_TAX_RATE_EFF_DTE for state and city rate changes and deletions or VNDR_TAX_RATE.CNTY_TAX_RATE_EFF_DTE for county rate changes and deletions.
	LST_UPD_BY	Varchar2(30)		'BILB0003' for changes and deletions only
	LST_UPD_DT	Date		System date and time as of the time the program was started.
	MAX_TX_AMT	Number(15,3)		Null
	MAX_TX_PCT	Number(6,3)		Null
	RCT_CHG_TYP	Varchar2(5)		Null
	TXTYP_TX_TYP_CD	Varchar2(4)	Y	'STAX'
	TAX_CDE_LONG_DSC	Varchar2(100)		location name(VNDR_TAX_RATE.LCL_TAX_JURIS_NAM or VNDR_TAX_RATE.CNTY_TAX_JURIS_NAM), hierarchy level ('STATE', 'COUNTY', or 'CITY') followed by the words "Sales Tax" for rental tax rates or "Transit Tax" for rental transit tax rates (e.g., SAINT LOUIS COUNTY, Sales Tax).
	MNL_MAINT_IND	Varchar2(2)		Null
STN_CNTR	STN_CNTR_ID	Varchar2(1)	Y	'1' (one)
	STN_CNTR_NM	Varchar2(30)	Y	'MAIN COUNTER'
	UDA_ATY_AREA_TYP	Varchar2(10)		USR_DFND_AREA.ATY_AREA_TYP of the row representing the lowest level in the hierarchy with which this branch is associated.
	UDA_AREA_ID	Varchar2(10)		USR_DFND_AREA.ATY_AREA_ID of the row representing the lowest level in the hierarchy with which this branch is associated.
	STN_STN_ID	Varchar2(10)	Y	LRD_IORG_PS_ORG_ID where IORG_TYP_DSC = 'Branch' and IORG_ID = 'GGBBBB' (where GG is the legacy group id associated with the branch and BBB is the legacy branch id).
	STN_CNTR_EFF_DTE	Date	Y	System date and time as of the time the program was started.
	STN_CNTR_XPR_DTE	Date		Null
	RECORD_STATUS	Varchar2(2)		Null
	CREATED_BY	Varchar2(30)	Y	Oracle user id used by the program to log into the database.
	CREATE_MODULE	Varchar2(1024)		'BILB0002'
	CREATE_TIMESTAMP	Date		System date and time as of the time the program was started.
	UPDATEDBY	Varchar2(30)		Null
	UPDATE_MODULE	Varchar2(1024)		Null
	UPDATE_TIMESTAMP	Date		Null

## 2.7 Detailed Process Flow



## 2.7.1 Read and Store Third Party Rates in the Database

This process will be executed each time a new file is received from RIA. The objective of this process is to ensure that the VNDR\_TAX\_RATE table always contains the complete, current rental and transit tax rates as supplied by RIA.

For the initial load, a complete tax rate file will be required. When processing a complete file, the load process will treat each record as an "add" record and insert the applicable data into the table. Any rows existing in the table will be deleted prior to loading a complete file.

When processing an update file (one containing only the changes since the previous file was issued), the load process will use the add, change, delete indicator on each record to determine the appropriate action to take with respect to the record as follows:

- If the value of this field is an 'A' the pertinent data will be inserted into the table, the add, change, delete indicator set to 'A' and the update applied indicator set to 'N'. If a row already exists in the table with the same state, zip, and population indicator values, an appropriate error message will be produced.
- If the value is a 'C', the appropriate rate, if found, will be updated to reflect the latest information, the add, change, delete indicator set to 'C' and the update applied indicator set to 'N'. If the corresponding rate is not found, an appropriate error message will be produced.
- If the value is a 'D', the corresponding row, if found, will be updated by setting the add, change, delete indicator to 'D' and the update applied indicator to 'N'. If the row is not found, an error message will be produced.

The following tables illustrate the process that will store and maintain the RIA tax rate data in the VNDR\_TAX\_RATE table. The purpose of this table is to maintain a complete, current set of applicable RIA tax rates in a manner that facilitates systematic access to this information. The creation and maintenance of the structures (i.e., areas, area hierarchies, tax codes, etc.) required to provide the VRS tax engine access to these rates is described in a subsequent process.

One of two input file formats may be used as input to this process; a complete file containing all rates or an update file containing only those records for which a change is required. Assume that a complete RIA file is received and contains the records shown in the following table.

### RIA File (complete)

State	Zip	Pop. Ind.	City	County	Local Rental Rate	Local Transit Rental Rate	County Rental Rate	County Transit Rate	Add Change Delete
MO	00000	00	MISSOURI		4.2250	0.0000	0.0000	0.0000	
MO	63011	00	BALLWIN	SAINT LOUIS	1.5000	0.0000	1.0000	0.0000	
MO	63011	01	ELLISVILLE	SAINT LOUIS	1.5000	0.0000	1.0000	0.0000	

If this file is used as input to the initial load process, all existing rows in the VNDR\_TAX\_RATE table will be deleted and all records on the RIA file will be treated as Add transactions. The VNDR\_TAX\_RATE table would contain the rows summarized in the following table. Note the values of the "add, change, delete" and "update applied" columns. These will be used by the process that builds and maintains the tax rates to determine which transactions in the VNDR\_TAX\_RATE table require processing and what type of processing is required.

**RIA\_DATA table (before rate load process)**

State	Zip	Pop. Ind.	City	County	Local Rental Rate	Local Transit Rental Rate	County Rental Rate	County Transit Rate	Add Change Delete	Update Applied
MO	00000	00	MISSOURI		4.2250	0.0000	0.0000	0.0000	A	N
MO	63011	00	BALLWIN	SAINT LOUIS	1.5000	0.0000	1.0000	0.0000	A	N
MO	63011	01	ELLISVILLE	SAINT LOUIS	1.5000	0.0000	1.0000	0.0000	A	N

After the process that builds the tax rate structures is run, the "update applied" column is set to Y to indicate that all required action to process the rate transaction is complete.

**RIA\_DATA table (after rate load process)**

State	Zip	Pop. Ind.	City	County	Local Rental Rate	Local Transit Rental Rate	County Rental Rate	County Transit Rate	Add Change Delete	Update Applied
MO	00000	00	MISSOURI		4.2250	0.0000	0.0000	0.0000	A	Y
MO	63011	00	BALLWIN	SAINT LOUIS	1.5000	0.0000	1.0000	0.0000	A	Y
MO	63011	01	ELLISVILLE	SAINT LOUIS	1.5000	0.0000	1.0000	0.0000	A	Y

Assume that an update RIA file is received and contains the records shown in the following table.

**RIA file (update)**

State	Zip	Pop. Ind.	City	County	Local Rental Rate	Local Transit Rental Rate	County Rental Rate	County Transit Rate	Add Change Delete
MO	63105	00	CLAYTON	SAINT LOUIS	2.2500	0.0000	1.0000	0.0000	A
MO	63011	00	BALLWIN	SAINT LOUIS	2.5000	0.0000	1.0000	0.0000	C
MO	63011	01	ELLISVILLE	SAINT LOUIS	1.5000	0.0000	1.0000	0.0000	D

If this file is used as input to the load process, any add transactions will simply be inserted into the table and the values of the "add, change, delete" and "update applied" columns set to A and N respectively. For change and delete transactions, the process will replace the existing row (i.e., the row with the same state, zip, and population indicator) with the new information from the RIA update file, setting the value of the "add, change, delete" column to a C or D as appropriate and setting the value of the "update applied" column to N. The VNDR\_TAX\_RATE table would contain the rows summarized in the following table.

**RIA\_DATA table (before rate load process)**

State	Zip	Pop. Ind.	City	County	Local Rental Rate	Local Transit Rental Rate	County Rental Rate	County Transit Rate	Add Change Delete	Update Applied
MO	00000	00	MISSOURI		4.2250	0.0000	0.0000	0.0000	A	Y
MO	63105	00	CLAYTON	SAINT LOUIS	2.2500	0.0000	1.0000	0.0000	A	N
MO	63011	00	BALLWIN	SAINT LOUIS	2.5000	0.0000	1.0000	0.0000	C	N
MO	63011	01	ELLISVILLE	SAINT LOUIS	1.5000	0.0000	1.0000	0.0000	D	N

Again, after the process that builds and maintains the tax rates is run, the "update applied" column is set to Y to indicate that all required action to process the rate transaction is complete.

**RIA\_DATA table (after rate load process)**

State	Zip	Pop. Ind.	City	County	Local Rental Rate	Local Transit Rental Rate	County Rental Rate	County Transit Rate	Add Change Delete	Update Applied
MO	00000	00	MISSOURI		4.2250	0.0000	0.0000	0.0000	A	Y
MO	63105	00	CLAYTON	SAINT LOUIS	2.2500	0.0000	1.0000	0.0000	A	Y
MO	63011	00	BALLWIN	SAINT LOUIS	2.5000	0.0000	1.0000	0.0000	C	Y
MO	63011	01	ELLISVILLE	SAINT LOUIS	1.5000	0.0000	1.0000	0.0000	D	Y

**2.7.2 Build and Assign Initial Hierarchies**

This process will be executed only during the initial conversion of 3<sup>rd</sup> party tax data. The objective of this process is to automate, to the extent possible, the creation of the database structures necessary to represent the hierarchy of taxing jurisdictions and assign branches to those hierarchies.

Tax and surcharge user defined areas and related hierarchies will be built for those areas in which Enterprise has one or more active branches. Therefore, branch data will be the primary source of information driving this conversion process. The conversion process will select, from the OFC\_DIR\_BR table, the following values for all active rental branches located in the U.S.

Description	Column	Data Type
Branch Identifier	BR_ID	varchar2(4)
Group Identifier	GRP_ID	varchar2(4)
County Location *	COUNTY_NAM	varchar2(34)
Mailing Address City	MAIL_ADDR_TXT	varchar2(34)
Mailing Address State Code	MAIL_ST_CDE	varchar2(4)
Mailing Zip Code	MAIL_ZIP_CDE	varchar2(18)

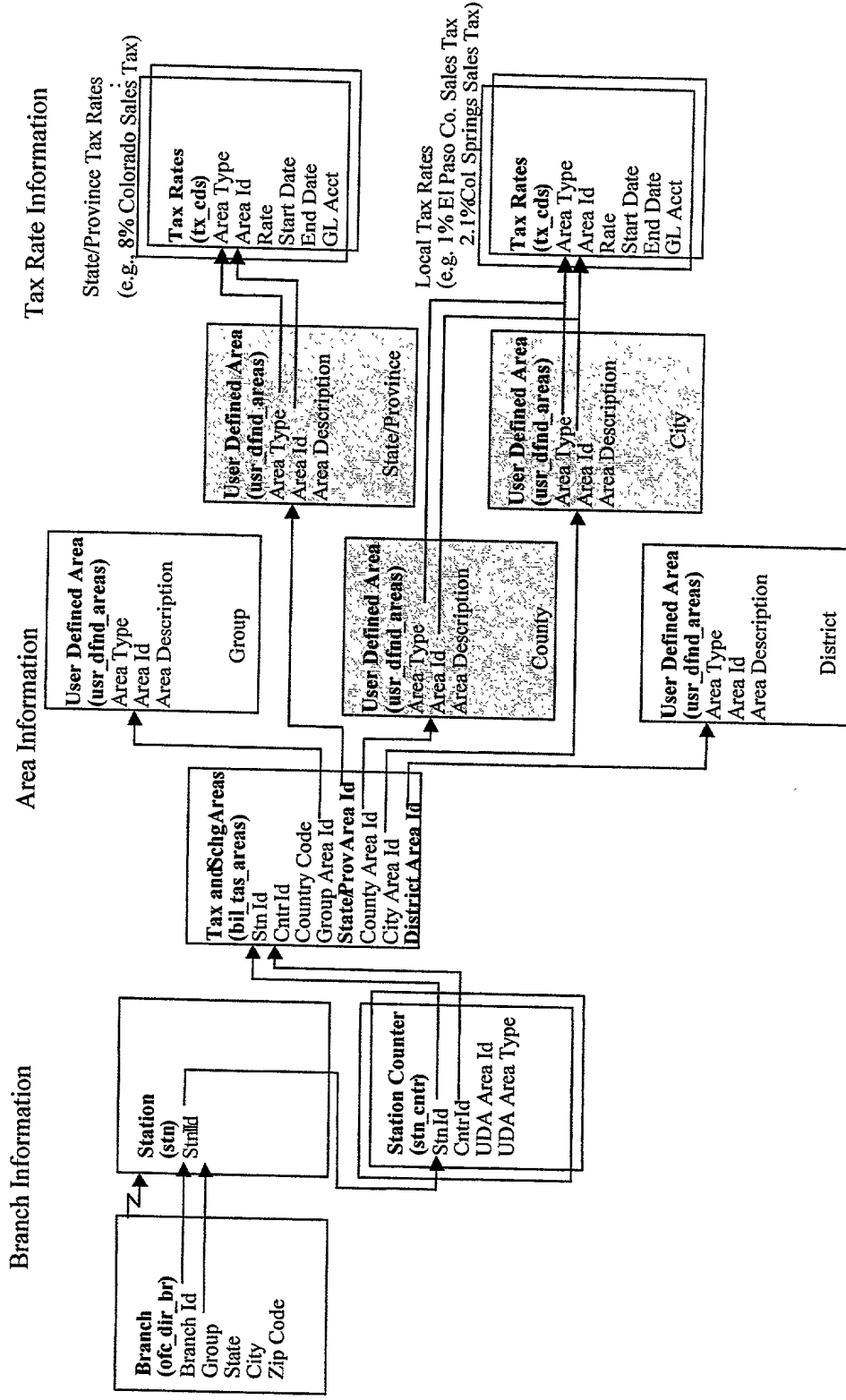
\* Obtain from LRD\_BR\_PROF, not OFC\_DIR\_BR

This information will be retrieved in sorted order by group, state, county, city, and zip code. For each row retrieved, an attempt will be made to obtain the correct tax jurisdiction information from the VNDR\_TAX\_RATE table.

The following diagram illustrates the relationships among the database tables comprising the tax and surcharge area hierarchies and how branches are associated with their respective tax rates.

Diagram illustrating the relationships among the database tables comprising the tax and surcharge area hierarchies and how branches are associated with their respective tax rates.

## Relationship of a Branch to Applicable Tax Rates



Continuing the example started above using the sample RIA data, the build and assign initial hierarchies process would create the initial tax areas and hierarchies required to store the RIA rates and support the VRS tax engine. Assume that only two branches (branches 01 and 02) exist and that they are operated by group 01. The individual rows that would be created as a result of the RIA transactions presented above are summarized in the following tables.

For each taxing jurisdiction, a row will be inserted into the USR\_DFND\_AREAS table. The area id will be system-generated and will be a value selected from an incremental sequence number maintained by the Oracle database. After processing the transactions received in the complete RIA file described above, the following areas would be created.

#### USR\_DFND\_AREAS

ATY AREA TYP	AREA ID	AREA DESC
TAS GRP	0000001	GROUP 01
TAS STPR	0000002	MISSOURI
TAS COUN	0000003	SAINT LOUIS
TAS CITY*	0000004	BALLWIN
TAS CITY*	0000005	ELLISVILLE

\* Note that a city level area will be created for each city on an RIA record having the same state and zip code as the branch for which the area is being created. Therefore, city areas may be created for cities in which Enterprise does not operate a branch.

The following rows would be inserted into the TAS\_USR\_DFND\_AREAS table. This table will allow programmatic determination of the group, state, county, or city for which a specific area was created.

#### TAS\_USR\_DFND\_AREAS

UDA AREA ID	AREA TYPE	GROUP ID	ISO COUNTRY CODE	STATE/ PROVINCE ID	COUNTY	CITY
0000001	TAS GRP	01	USA			
0000002	TAS STPR	01	USA	MO		
0000003	TAS COUN	01	USA	MO	SAINT LOUIS	
0000004	TAS CITY	01	USA	MO	SAINT LOUIS	BALLWIN
0000005	TAS CITY	01	USA	MO	SAINT LOUIS	ELLISVILLE



In order to build the appropriate hierarchy of taxing jurisdictions, the following rows would be inserted into the AREA\_RLTNS table to associate Missouri with group 01, St. Louis county with Missouri and both Ballwin and Ellisville with St. Louis county.

### AREA\_RLTNS

UDA AREA ID PRNT	UDA ATY AREA TYP PRNT	UDA AREA ID CHLD	UDA ATY AREA TYP CHLD
0000001	TAS_GRP	0000002	TAS_STPR
0000002	TAS_STPR	0000003	TAS_COUN
0000003	TAS_COUN	0000004	TAS_CITY
0000003	TAS_COUN	0000005	TAS_CITY

If sufficient information is available to match a branch to one and only one city-level (or the lowest level specified by Enterprise for the state in which the branch resides) area, the branch will be assigned to all areas in the hierarchy in which the city (or other specified level) exists by creating a row in the BIL\_TAS\_AREAS table. Rows in this table allow the tax and surcharge engines to identify the specific areas of the hierarchy in which the branch exists as follows:

### BIL\_TAS\_AREAS

STN ID	STN CNTR ID	GROUP AREA ID	STATE/ PROVINCE AREA ID	COUNTY AREA ID	CITY AREA ID
01	1	0000001	0000002	0000003	0000004
02	1	0000001	0000002	0000003	0000005

A row would be inserted into the STN\_CNTR table for each branch as follows:

### STN\_CNTR

STN ID	SNT CNTR ID	STN CNTR NM	UDA AREA ID	UDA ATY AREA TYP
01	1	COUNTER 1	0000004*	TAS_CITY
02	1	COUNTER 1	0000005*	TAS_CITY

\* The uda\_area\_id will be populated with the id of the lowest appropriate level area in the hierarchy.

The build and assign initial hierarchies process will be executed only during initial conversion. Therefore, when the RIA update file described in the example above is received, this process would take no further action regarding the maintenance of areas, hierarchies, or the assignment of branches to them.

## 2.7.3 Load and Maintain RIA Tax Rates

This process will be executed each time a new file is received from RIA. The objective of this process is to ensure that the tax rates present in the TX\_CDS table reflect the applicable tax rates for any given point in time for those states for which RIA rates are used.

Continuing the example from above, the following rows would be inserted into the TX\_CDS table to store the tax rates applicable to each area as specified in the RIA complete file (the start and inactive dates used in the examples below are assumed to have come from the RIA files).

### TX\_CDS

TX CD	TXTYP TX TYP CDE	STRT DTE	INACTV DT	CRY ARIMP CRY CD	EXMP T IND	UDA AREA ID	UDA ATY AREA TYP	TX RT	TAX CDE LONG DSC
00001	STAX	01-MAY-1996		US	Y*	0000002	TAS STPR	4.2250	**
00002	STAX	01-APR-2001		US	Y*	0000003	TAS COUN	1.0000	**
00003	STAX	01-APR-1996		US	Y*	0000004	TAS CITY	1.5000	**
00004	STAX	01-APR-1996		US	Y*	0000005	TAS CITY	1.5000	**

\* The value placed in the exempt indicator will be 'Y' for all rates loaded initially loaded by this process.

\*\* This column will be populated with the location name, hierarchy level, followed by the words "Sales Tax" for rental tax rates or "Transit Tax" for rental transit tax rates (e.g., SAINT LOUIS COUNTY, Sales Tax").

For all rows inserted into the TX\_CDS table, both the TX\_NM and CR\_CHG\_DESC columns will be populated with "RENTAL TAX" if the row represents a rental rate or "RENTAL TRANSIT TAX" if the row represents a rental transit rate.

Since this reflects the initial conversion of rates, each row is inserted into the tax\_cds table with no value specified for the inactive date. In general, if multiple records had been present in the RIA data for a given jurisdiction, once the first row is inserted to reflect the rate for that jurisdiction, subsequent records would not result in a row being inserted since the appropriate rate for the jurisdiction would already be reflected in the table.

Continuing the example from above, the rows in the tx\_cds table would appear as follows after processing the RIA update file described above.

## TX\_CDS

TX CD	TXTYP TX TYP CDE	STRT DTE	INACTV DT	CRY ARIMP CRY CD	EXMPT IND	UDA AREA ID	UDA ATY AREA TYP	TX RT	TAX CDE LONG DSC
00001	STAX	01-MAY-1996		US	Y	0000002	TAS STPR	4.2250	**
00002	STAX	01-APR-2001		US	Y	0000003	TAS COUN	1.0000	**
00003	STAX	01-APR-1996	01-MAY-2001	US	Y	0000004	TAS CITY	1.5000	**
00006	STAX	01-MAY-2001		US	Y	0000004	TAX CITY	2.5000	**
00004	STAX	01-APR-1996	01-MAY-2001	US	Y	0000005	TAS CITY	1.5000	**
00005	STAX	01-MAY-2001		US	Y	0000006	TAS CITY	2.2500	**

The update activity to this table can be summarized as follows:

**Add** – The add transaction for the city of Clayton resulted in the insertion of a new row, tx\_cd 00005. This assumes the required area to represent Clayton has been manually created. If the area did not exist in the database, the insert into the tx\_cds table would have been bypassed.

If a subsequent add transaction were received with the same rate for the city of Clayton within Saint Louis county, MO (perhaps for a different zip code), no update activity would occur since the rate for the city would be current (i.e., 2.25%).

**Change** – The change transaction for the city of Ballwin resulted in the update of an existing row, tx\_cd 00003, and the insertion of a new row, tx\_cd 00006 to inactivate the 1.5% rate and activate the new 2.5% rate. If the area or rate did not exist in the database, the update to and insert into the tx\_cds table would have been bypassed.

**Delete** – The delete transaction for the city of Ellisville resulted in the update of an existing row, tx\_cd 00004, to inactivate the rate. If the area or rate did not exist in the database, the update to the tx\_cds table would have been bypassed.

## 2.8 Calling Process Variations

### 2.8.1 Initial Conversion

During the initial conversion, all three processes comprising the third party tax rate data conversion will be executed.

### 2.8.2 On-going, Periodic Updates

During on-going conversion, only the read and store third party rates in the database and the load and maintain RIA tax rates processes will be executed. The build and assign initial hierarchies will not be run to support on-going maintenance of tax areas and hierarchies.

### 3 Key Risks, Assumptions, Issues, Dependencies

#### 3.1 Risks

- The ability to correctly handle exceptions to the rates within the RIA file has not been completely addressed. RIA provides various codes and textual explanations to identify exceptions that may exist to the rates specified for given jurisdictions. Although the rates are being stored at the appropriate taxing jurisdiction level, some exceptions can apply to specific portions of a jurisdiction. An addendum will be provided to this document to address the extent to which the conversion process can assist in handling these exceptions.
- The processes defined in this document do not support multiple rates for the same tax type for different areas of a given city. There is only one such case in the current RIA file. If this is a valid situation, it could be handled manually. The same is true if, in the future, similar cases arise. However, if the number of cases becomes significant, the amount of manual effort could be considerable.

#### 3.2 Assumptions

- RIA's InSource Sales and Use Tax Rate Update Subscription Service files will be used as the primary source of tax rates for the third party tax rate data conversion process.
- A complete RIA file will be used to build the initial area hierarchy and tax rates. Subsequently, all update files will be processed in order (i.e., updates for any given month cannot be processed before processing the prior month's file).
- A process and/or procedure will exist to place the data (complete or update file) on the CD provided by RIA into a specified UNIX file in a specified directory which will be accessible by the first of the conversion processes described in this document.
- The rates used from the RIA data will be the rental rates and rental transit rates.
- For tax purposes, user defined areas and related hierarchies will be created by the initial RIA conversion process only. Any subsequent area and hierarchy maintenance will be handled manually.

- Active U.S. branches for which areas and hierarchies will automatically be created will be those branches:
  1. Present in the OFC\_DIR\_BR table having:
  2. STAT\_CDE = 'A'
  3. DR\_BR\_TYP\_IND = 'Y'
  4. GRP\_ID that is:
  5. Present on the OFC\_DIR\_GRP table having:
  6. a value between 0 and 69,
  7. GRP\_TYP\_CDE = 'B'
- The conversion process will not build any district level areas.
- All "counters" for a given branch will reside in the same area for tax purposes (i.e., there will be only one row in the STN\_CNTR table for each branch).
- Local tax rates loaded into the tx\_cds table from the RIA data will be stored separately, at the appropriate county or city level. For example, where both county and city/town rental and rental transit taxes are applicable, separate rates will be stored at the appropriate level for county rental, county rental transit, city rental and city rental transit taxes.
- For each state, the conversion process will determine the appropriate level to which the hierarchy is to be built based on a file provided by Enterprise.
- After initial conversion, tax jurisdictions and hierarchies will be maintained manually.
- Tax rates associated with jurisdictions not present in the RIA data will be maintained manually.
- The third party tax rate conversion process will not associate products (charge items) with tax rates.
- County name will be available to the conversion process (i.e., in a database table) in a manner in which it can be associated with a given branch.
- If multiple rates are present in one county for the same tax type (i.e., rental tax or rental transit tax), the county link code will be used to distinguish the portions of the county with various rates. A separate area will be created for each county/link code combination.
- If the same city appears with a non-zero tax rate in more than one county within the same state (e.g., Chicago in both Cook and Du Page counties), a separate city-level tax and surcharge area will be created for each county.

### 3.3 Issues

- Some counties in the RIA file have more than one county tax rate depending on the location within the county. How these will be handled may require additional discussion. The county link code will be used to distinguish the portions of a county with various rates. A separate area will be created for each county/link code combination. However, where varying rates within a city or county are due to exception codes or the city or county indicator values in the RIA file, may need a method of handling these, depending on whether RIA rates will be used for these states and whether such exceptions are applicable to Enterprise.
- How will cities having multiple tax rates in the RIA file be handled? There appears to be only one instance of this. This should be confirmed with RIA (or the taxing jurisdiction) and, if correct, a means of handling this situation should be determined.



ECARS V2.0  
Accurate Out the Door Pricing

Detailed Design Specification  
Surcharge Engine  
Iteration 3 - Final

**perotsystems™**

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## Gaps Addressed Summary

Gap ID	Functional Area	Brief Description
20	Surcharge Engine	VRS does not stop charging License fee after it's recouped
21	Surcharge Engine, Tax Engine	Ontario Fuel Tax Requirements
22	Surcharge Engine	Tax and Surcharges should be assessed based on 'Transaction type'
23	Surcharge Engine, Tax Engine	Need to support taxes based on vehicle type
25	Surcharge Engine, Taxes Engine	Allow group level maintenance of Taxes & Surcharges
27	Surcharge Engine, Tax Engine	Need to provide functionality to retain a historical perspective for any date in time to track.
29	Surcharge Engine, Tax Engine	The system must maintain a history of Tax and Surcharge information
31	Surcharge Engine	Provide minimum and maximum vehicle license fee surcharge per day
141	Surcharge Engine, Tax Engine	Surcharges & Taxes based on Registration for North and South Carolina vehicles

## Document Control

### Primary Document Owner/Domain

Issued by: (PSC)

Name	Position/Department	Signature	Date
Stacey Shewbridge	Manager/Tax and Surcharge		

### Customer Approval

Authorized by: (ERAC)

Name	Position/Department	Signature	Date

### Document History

Version	Date	Author	Reason for Change
1.0	06/12/2001	Pattabhi Boinpally	Initial draft of Design Document
1.1	06/18/2001	Pattabhi Boinpally	Draft doc after 1 <sup>st</sup> Internal Review
1.2	07/10/2001	Pattabhi Boinpally	Draft doc after 2 <sup>nd</sup> Internal Review
1.3	07/16/2001	Pattabhi Boinpally	Draft doc after Perot Internal Review
1.4	10/03/2001	Pattabhi Boinpally	Approved Design Document consolidated with published addendums.

1.5	10/18/01	Stacey Shewbridge	Updated sections under 2.1.4 and section 2.2.9.

# 1 Introduction

## 1.1 Overview

The purpose of this document is to provide detailed design specifications of how Surcharge Engine component of VRS will be utilized in calculating all surcharges for all applicable lines of businesses. The scope of this document is to present the high level design of Surcharge Engine and to address all the gaps identified during Gap Analysis, that are part of iteration 3 as defined in 'Gaps Addressed Section' of this document.

## 1.2 Dependencies

In order to implement the functionality addressed in this document, the processes calling the surcharge engine must be modified to accommodate the API changes described herein.

## 1.3 Data Conversion

Enterprise decided not to convert data from its TX07 system. Data setup for surcharges could be done manually using data maintenance screens and/or by collecting all applicable surcharges into spreadsheets for each group, then using scripts to load them into the surcharges data model.

## 1.4 Impact Analysis

The current VRS version of the surcharge engine consists of a main surcharge service module and an application interface (API) to this module. The engine also reads several tables from an Oracle database for retrieving surcharge related data. For performance reasons, no transaction related data is written to the database inside the engine. The engine returns all the calculated values to the caller processes.

For Enterprise, the VRS code requires some change to meet the business needs as described in the gaps. To resolve the gaps, changes will be required to the following areas: the surcharge data model, API to the engine, and the surcharge service module.

## 2 Design Specifications

### 2.1 Overview

It is envisaged that all the applications that need to calculate surcharges will call the surcharge engine. The primary function of the surcharge engine is to calculate surcharges based on the specific input parameters passed to it. The surcharge engine retrieves and computes applicable surcharges based on the inputs and returns the list of surcharges to the caller. The surcharge engine is called by the charge engine for every rental charge line. This module provides the functionality to calculate surcharges at five levels: group, state, county, city and district. The surcharge engine also supports vehicle specific surcharges.

In addition, the tax engine does *not* currently support varying taxes based on various criteria (e.g., vehicle cost.) To an extent VRS can support this by implementing such taxes as surcharges. The surcharge engine has support for flexibility in calculation rules and examples of this have been used in VRS to date. In order to resolve some identified gaps this functionality will be implemented at Enterprise. This actually means populating surcharge tables with tax data (e.g. schg\_cds, calc\_rls, etc.) The surcharge engine then would pick up and process this data, not the tax engine. In these cases, the resultant charge will still be a *tax*; it just allows use of the surcharge engine's more flexible calculations to compute the taxes. A little extra care should be given in these cases to consider tax on tax or tax on surcharge implications. For example, if such a tax should apply to some other surcharge (i.e. a tax on surcharge scenario) then this tax would actually get set up as a *surcharge* on a surcharge. Similar consideration should be given for tax on tax situations and scenarios such as tax exceptions and bundling.

#### 2.1.1 Surcharge Types

A surcharge type is used to classify surcharges into multiple categories. Multiple surcharge codes can be grouped under one surcharge type. This categorization helps in identifying and posting the individual surcharges to the right GL accounts and also used for contract exemptions. Contracts can be exempted from surcharge types, therefore all the surcharges under surcharge type are automatically exempted. The following examples are the main surcharge types currently supported by VRS. The system is not limited to the examples below:

- LEGL - legal mandated surcharges, generally imposed by municipality at group, state, county, city, or district level
- OPTL - optional surcharges
- CONT - contract mandated surcharges
- ARPT - airport fees
- VREG - vehicle registration based surcharges

## 2.1.2 Exemptions

Some customers are exempted from surcharges. There are three types of customer exemptions:

- **Local Exemptions** - In some locations, rental branches do not charge the local customers (e.g., if the zip code of the driver is one of the exempted zip codes then the branch will not charge the customer).
- **Agreement/Contract Exemptions** - This type of exemption is specified at the contract level and is applicable to a surcharge type rather than an individual surcharge.
- **Tax exemption flag through API** - In addition to the above mentioned exemptions, the tax exemption flag that comes through API can also determine the applicability of surcharges. The exemption status is used to either include (N) or exempt (Y), but in the case of Canada it could have values like 'P' (PST/QST exempt), 'G' (GST/HST exempt) and 'B' (both).

## 2.1.3 Surcharge Hierarchy

Surcharge area hierarchy will be the basis for determining and calculating surcharges. Before defining the surcharges, a hierarchy of all the areas and branches is defined. In VRS both the tax and surcharge engines depend on a common hierarchy structure. Hierarchies are divided into four levels: state, county, city and district. To meet ERAC requirements for group level tax and surcharges, an area type of group will be added which will add a fifth level to the hierarchy.

Once the areas are defined, the branches can then be linked to the areas. Branches can be linked to only one area and one area can have multiple branches. Once the complete area hierarchy is defined, all the surcharges can then be defined and linked to the area code. Thus for a given branch, the system can find all the applicable surcharges from the surcharge hierarchy.

## 2.1.4 Calculation Rules supported by Surcharge Engine

When an application needs to assess the surcharges on a rental, it calls the surcharge engine via an API. Based on the input parameters provided, the surcharge engine then calculates the surcharges and sends the information back to the caller via an API. Surcharge engine is called for every product that can be surcharged.

Surcharges are calculated using a calculation rule. A calculation rule is a combination of variables stored in a database table called CALC\_RLS. Each example below shows the columns in CALC\_RLS that are applicable to a particular calculation rule. A default value is provided for those columns that are defined as NOT NULL but do not apply to a calculation rule. We have intentionally left out those columns that are NULLABLE and are not applicable to the calculation rules, if these fields were to be populated the surcharge engine results may not reflect the intended surcharge calculation.

### 2.1.4.1 Percentage Based Rules

Percentage based surcharges are applied to the product value. In order to assess correct rates, all the products that can be surcharged must be associated to the appropriate surcharges.

#### 2.1.4.1.1 Product Cost based with no rental duration limits

This is one of the basic calculation rules. A percent rate applies to the product revenue.

Rule ID	Rule Value	Rule Type	Based On	Charge Per	Min Days	Max Days	Rule ID@Max	Re-calc
10%	10	%	CVAL	RNTL	0			N

#### 2.1.4.1.2 Product Cost based with rental duration limits.

The surcharge assessed under this rule is calculated for a specified time limit. The surcharge is not assessed, if the vehicle is rented for more than 'n' number of days.

Rule ID	Rule Value	Rule Type	Based On	Charge Per	Min Days	Max Days	Rule ID@Max	Re-calc
10%	10	%	CVAL	RNTL	0	28		N

#### 2.1.4.1.3 Vehicle Cost based

The surcharge assessed under this rule is calculated on the basis of vehicle cost. If the cost of the rental vehicle falls in the specified range then the appropriate rate is applied, otherwise the focus switches to a new rule until appropriate match is found. In order to assess the surcharge accurately, a vehicle number must be passed to the Surcharge engine. If for some reason the vehicle cost or vehicle number is not available, the minimum rate is charged.

Example - British Columbia, Canada locations:

Rule ID	Rule Value	Rule Type	Based On	Charge Per	Min Days	Max Days	Min. Charge	Max Charge	Rule ID@Max	Re-calc
BC7%	7	%	VCST	RNTL	0	0	0	31999	BC8%	Y
BC8%	8	%	VCST	RNTL	0	0	32000	32999	BC9%	Y
BC9%	9	%	VCST	RNTL	0	0	33000	33999	BC10%	Y
BC10%	10	%	VCST	RNTL	0	0	34000			N

### 2.1.4.2 Flat Rate Rules

Flat rate surcharge is a fixed amount that is applied to only one product (e.g., time and mileage). When it comes to flat rate surcharges, the surcharge engine is 'currency neutral'. The \$ symbol is used to indicate a flat rate surcharges. Mentioned below are examples of flat rate surcharges.

#### 2.1.4.2.1 Per Rental Based

This type of surcharge is charged only once, regardless of the rental duration.

Example - Chicago:

Rule ID	Rule Value	Rule Type	Based On	Charge Per	Min Days	Re-calc
\$2.00	2.00	\$	NONE	RNTL	0	N

#### 2.1.4.2.2 Per Rental Day based with no rental duration limits.

This type of surcharge is assessed for every day the car is rented. The rental duration is based on the 24-hour clock.

Example: If a renter rents the car for more that 24 hours + grace period then the duration is considered to be two days:

Rule ID	Rule Value	Rule Type	Based On	Charge Per	Min Days	Max Days	Rule ID@Max	Re-calc
\$2.00D	2.00	\$	NONE	RDYS	0			N

#### 2.1.4.2.3 Per Rental Day based with rental duration limits.

This type of surcharge is assessed for every day the car is rented. The rental duration is based on the 24-hour clock. For example, if a renter rents the car for more that 24 hours + grace period then the duration is considered to be two days. If the rental duration exceeds the predefined range, then the surcharge is assessed for the per day rate times maximum days.

Example - FL locations:

Rule ID	Rule Value	Rule Type	Based On	Charge Per	Min Days	Max Days	Rule ID@Max	Re-calc
\$2.05D	2.05	\$	NONE	RDYS	0	30		N

#### 2.1.4.2.4 Per Calendar Day based with no rental duration limits.

This type of surcharge is assessed for every calendar day the car is rented.

Example - If the customer rents a car on Jan-1-2000 at 2300 hrs and returns on and it on Jan-2-2000 at 0003 hrs then the surcharge will be assessed for 2 days:

Rule ID	Rule Value	Rule Type	Based On	Charge Per	Min Days	Max Days	Rule ID@Max	Re-calc
\$1.00D	1.00	\$	NONE	CDYS	0			N

#### 2.1.4.2.5 Per Calendar Day based with rental duration limits.

This type of surcharge is assessed for every calendar day the car is rented.

Example - If the customer rents a car on Jan-1-2000 at 2300 hrs and returns on and it on Jan-2-2000 at 0003 hrs then the surcharge will be assessed for 2 days. In this type of a surcharge a rental duration range is specified. If the vehicle rental duration exceeds the range specified, the surcharge is assessed up to the maximum duration specified in the range:

Rule ID	Rule Value	Rule Type	Based On	Charge Per	Min Days	Max Days	Rule ID@Max	Re-calc
\$1.00D	1.00	\$	NONE	CDYS	0	28		N

#### 2.1.4.3 Vehicle Registration Based

This type of surcharge is based on the actual registration cost of the vehicle. This type of surcharge is used to recoup the registration cost on a per day basis. The per day registration cost is 1/365<sup>th</sup> of the registration cost. In order to assess this surcharge, vehicle number must be present at the time of calculation. If for any reason a registration cost is not found, the surcharge engine will assess the maximum charge per day that is defined for the vehicle category rented.

Example - California locations:

Rule ID	Rule Value	Rule Type	Based On	Charge Per	Min Days	Max Days	Rule ID@Max	Re-calc
\$0VREG	0.00	\$	VREG	RDYS	0			N

#### 2.1.4.4 Vehicle Type Based

This type of surcharge is based on type of the vehicle. It is assessed for all types of cars and trucks that are less the 3/4 of a ton in weight. In order to assess this surcharge, vehicle number must be present at the time of calculation. If for any reason weight value is not found, the surcharge engine will not assess any surcharge. Also if the rental duration exceeds 'n' days, the surcharge will not be assessed.

Rule ID	Rule Value	Rule Type	Based On	Charge Per	Min Days	Max Days	Rule ID@Max	Re-calc
1.5D30	1.50	\$	VTYP	RDYS	0	28	\$0	Y
\$0	0.00	%	CVAL	RNTL	0			N

#### 2.1.4.5 Switching from One Rate Type to Another

This allows switching between calculation rules based on certain condition like exceeding the maximum number of days. Mentioned below are examples of these type of conditions.

##### 2.1.4.5.1 Percentage to Percentage

In this type of surcharge, if the rental exceed the specified rental duration the surcharge engine switches to a new rule with a different percentage rate.

Rule ID	Rule	Rule	Based	Charge Per	Min	Max	Rule	Re-calc
---------	------	------	-------	------------	-----	-----	------	---------



	Value	Type	On		Days	Days	ID@Max	
8%	8.00	%	CVAL	RNTL	0	30	10%	Y
10%	10.00	%	CVAL	RNTL	0			N

#### 2.1.4.5.2 Percentage to Flat Rate

In this type of surcharge if the rental exceeds a specified range, the surcharge engine switches to a new rule that is a flat rate.

Rule ID	Rule Value	Rule Type	Based On	Charge Per	Min Days	Max Days	Rule ID@Max	Re-calc
8%	8.00	%	CVAL	RNTL	0	30	\$2D	Y
\$2D	2.00	\$	NONE	RDYS	0			N

#### 2.1.4.5.3 Flat Rate to Percentage

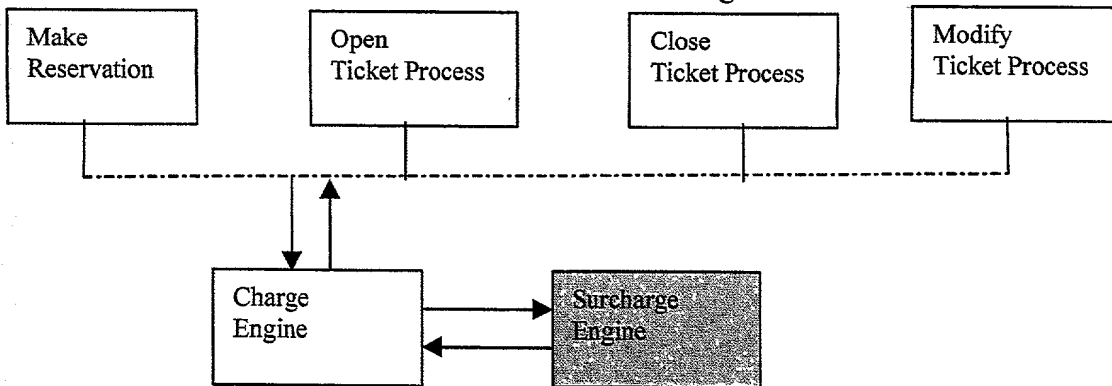
In this type of surcharge, if the rental exceeds a specified range, the surcharge engine switches to a new rule that is a percentage rate.

Rule ID	Rule Value	Rule Type	Based On	Charge Per	Min Days	Max Days	Rule ID@Max	Re-calc
\$2D30	2.00	\$	NONE	RDYS	0	30	3%	Y
3%	3.00	%	CVAL	RNTL	0			N

## 2.2 Detailed Design Description

The surcharge engine is a collection of 'C' and 'Pro\*C' programs implemented in the form of a Tuxedo service with an API. The API includes a generic 'C' function, 'FindSchgs' which handles the Tuxedo specifics.

The surcharge engine is a data driven service and relies on surcharge data maintained in a relational database to perform its functions (i.e., if no surcharges are set up, no surcharges can be assessed by the engine). For Enterprise, data maintenance will be done through front end user screens.



Before a call is made to surcharge engine, surcharge related data is expected to have been set up and generally it is set up in the following order by the data reference team:

- Tax & surcharge hierarchy
- Surcharge calculation rules
- Surcharge types
- Surcharge codes
- Surcharges per charge types
- Exempted zip codes
- Exempted surcharges for exempted zip codes (local exemptions)
- Agreement/contract level surcharge exemptions
- Vehicle surcharge ranges

Details are provided below for each gap identified during the gap analysis. The database and API changes for gaps addressed are highlighted in the subsequent sections.

## 2.2.1 Gap 20: Vehicle License Fee Cap

### Gap Description:

This fee is designed to reimburse Enterprise for the VLF paid on a vehicle. It is calculated by taking the VLF paid for a specific unit and dividing it by 365 days. The VLF stops once the fee has been reimbursed to Enterprise.

### Solution:

This involves changes to API as shown in the inputs section to pass actual VLF paid, accumulated VLF, and vehicle registration expiration date. In addition, a new column is being added to DVC\_ST\_SCHGS, where the minimum and maximum amounts are stored for reservation time quotation. The column, CAR\_CLS\_SUFEX\_CDE will be added to properly reference the ERAC car class table (which has CAR\_CLS\_SUFEX\_CDE as a component of the primary key).

Surcharge engine will be modified to determine if the annual VLF caps have been met or exceeded and thus not charge VLF. In order to identify the surcharges that belong to VLF type surcharges, a new base type code 'VCAP' needs to be established and attached to the calculation rules that are set up and attached to surcharge codes. **NOTE: After some additional analysis it was decided that the existing base type code 'VREG' can be used to meet this requirement. This will reduce the amount of data ERAC will need to setup.**

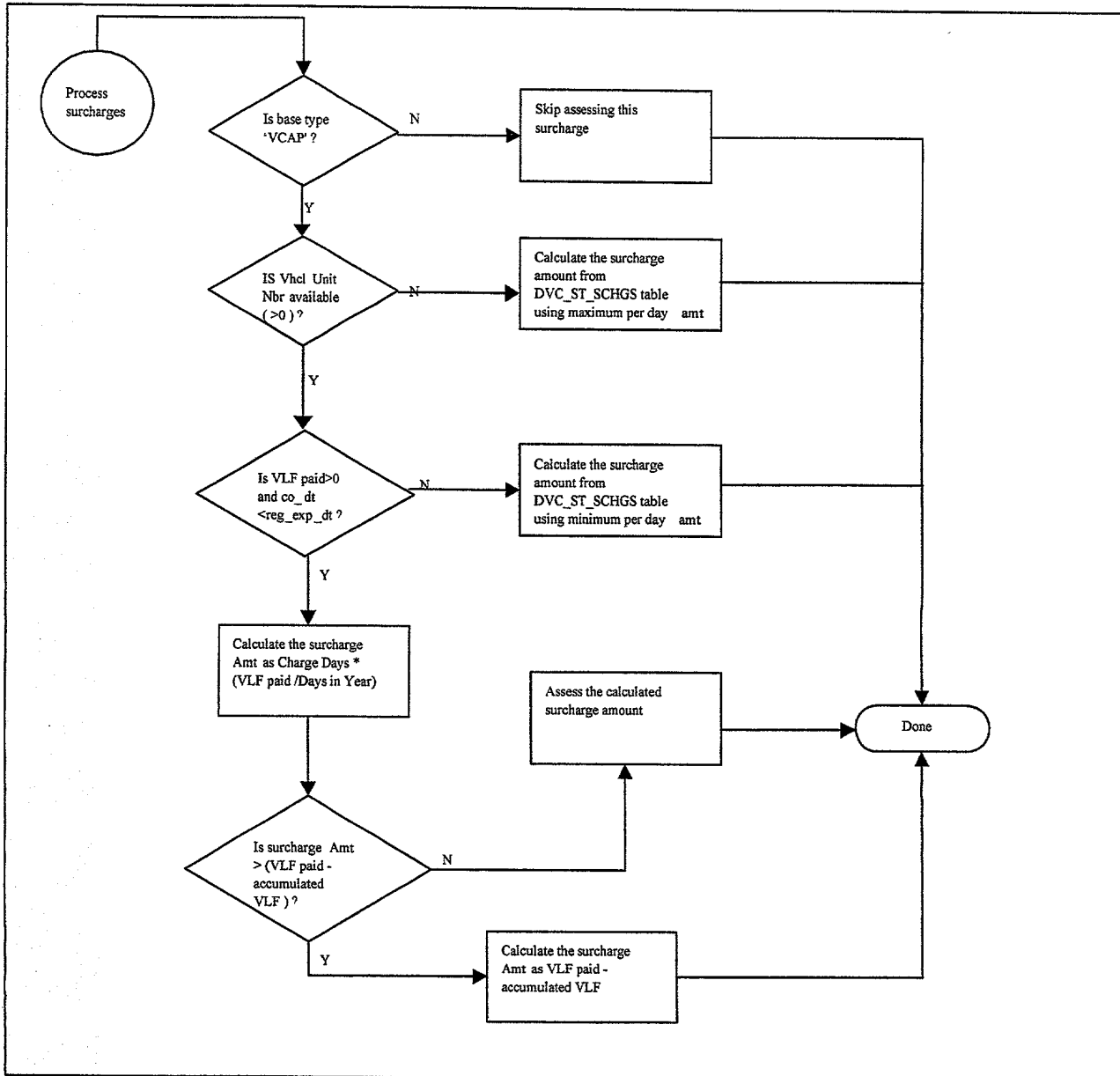
For any reason, if vehicle specific data is not provided to the surcharge engine, then the surcharge engine returns minimum and maximum per day surcharge amounts based on the car class, group and the state code for check-out branch. These minimum and maximum values are maintained in the DVC\_ST\_SCHGS table.

### Pseudo code:

```
If the surcharge is based on 'VREG' then
    Copy the VLF related values from API

    If the VLF paid >0 and co_date < reg_exp_dt then
        VLF per day = VLF paid /Days in Year
        surcharge amt = VLF per day * charge_days
        If surcharge amt > (VLF paid - accumulated VLF) then
            surcharge amt = VLF paid - accumulated VLF
        else
            surcharge amt = surcharge amt
        End if
    End if
End if
```

Flow Chart:



## 2.2.2 Gap 21: Ontario Fuel Tax requirements

### Gap Description:

In Ontario, Canada, Enterprise needs to recoup pre-paid Fuel Tax with the surcharge that gets capped once the Fuel Tax has been fully recouped. The amount of charge is calculated as Fuel Tax paid divided by 180 days.

### Solution:

Enterprise plans to prepay the Ontario Fuel Tax and recoup the expense with a flat per day surcharge. This method is currently supported in VRS and requires no change to the surcharge engine. At this time Enterprise does not want to cap this amount. Since VRS currently supports this requirement, there is no longer a gap to support Ontario Fuel Tax.

## 2.2.3 Gap 22: Surcharges and Taxes need to support Transaction type

### Gap Description:

Need the ability to exclude surcharges based on rental types. For example, a motor vehicle rental surcharge may be excluded from insurance replacement rentals.

### Solution:

A new table, EXMPT\_RNTL\_SCHG\_CDS, will be created to support this gap. (Please refer to the Database Impacts section for details on the table definition.) This new table will maintain all the excluded surcharge codes based on the rental type code. The surcharge engine code will be modified to look for any exceptions in this table before returning the applicable surcharges for each call. If there are any taxes that need to be excluded based on rental type, then they will be implemented as surcharges by setting up the tax data in the surcharge tables.

## 2.2.4 Gap 23: Sales Tax Based on Vehicle Type

### Gap Description:

In Illinois, Maine, and Maryland, sales taxes are calculated based on the type of vehicle being rented. For example, Maryland car rates are 11.5% and van rates are 8%.

### Solution:

In the gap description, type of vehicle means the same thing as vehicle category or car class for Enterprise. Although this is a tax requirement, the solution involves accommodating it through the surcharge engine. To support this gap we need to change CALC\_RLS table to add a new column called vehicle category (*See DDL changes section 2.3.1.4 for database change*). Since the client application captures vehicle category information at time of reservation, we will use vehicle category as the basis for calculating sales tax in Illinois, Maine, and Maryland.

- Change CALC\_RLS table to add a new attribute VHCL\_CAT\_CD and CAR\_CLS\_SUFX\_CDE to store car class code and its suffix.
- Set up new rules with a base type of VCLS (for vehicle class) through data setup screens.
- Change surcharge engine code to accommodate switching to different rules based on the input car class and calculate the correct surcharge amount.

See the notes in Tax engine document regarding the data maintenance issues for taxes implemented as surcharges.

An example with some sample data is shown below:

Rule Id	Rate & Type	Calc Basis	Charge Per	Car Class	Car Class Sufx Cd	Switch to Rule
R1	11.5 %	VCLS	RNTL	ECAR	01	R2
R2	11.5%	VCLS	RNTL	MCAR	01	R3
R3	10%	VCLS	RNTL	PCAR	01	R4
R4	8.0%	VCLS	RNTL	XVAR	01	R5
R5	7.5%	VCLS	RNTL			

## 2.2.5 Gap 25: Allow group level maintenance of Taxes & Surcharges

### Gap Description:

Maintain the system on a decentralized basis at the Corporate level. ERAC has a decentralized structure (groups are typically separate legal entities).

### Solution:

Group will be added as another level in the tax and surcharge hierarchy. This amounts to a new area type and a new column on the BIL\_TAS\_AREAS table. This will allow defining and maintaining surcharges at the group level as well as the other levels (state, county, city and district.) The surcharge engine then needs to be modified to query for surcharges at the group level in addition to the existing levels. *Data base changes for this gap are shown in section 2.5.1.1.*

Existing SQL query will be changed in the surcharge engine as shown below:

```
SELECT
    all surcharge data
    all calculation rules data
FROM
    ...
WHERE
    ...
AND SC.UDA_AREA_ID IN (
    :bta_group_id,
    :bta_stpr_id,
    :bta_count_id,
    :bta_city_id,
    :bta_dist_id )
```

## 2.2.6 Gap 27: Accommodate detaching and reattaching of Branches in Hierarchy

### Gap Description:

When branches physically change locations, the system needs to accommodate this move within the tax and surcharge hierarchy. In addition, the system must retrieve the appropriate surcharges, based on input date, for where the branch was at that time.

### Solution:

Effective start and end dates will be added to BIL\_TAS\_AREAS and STN\_CNTR to track, over time, where a branch resides within the hierarchy. The surcharge engine will be modified to use open ticket date in its query of BIL\_TAS\_AREAS to get the appropriate surcharges for a given branch at that point in time. This assumes that the maintenance screens will populate these dates ensuring that, for a given branch, there are no overlapping dates in the BIL\_TAS\_AREAS table.

The surcharge engine code will be modified to fetch area hierarchy using effective dates as follows:

```
DECLARE
    bil_tas_area_curs CURSOR FOR
SELECT
    TAS.GROUP_ID,
    TAS.STPR_ID,
    TAS.COUN_ID,
    TAS.CITY_ID,
    TAS.DIST_ID
FROM
    GWYDB.BIL_TAS_AREAS TAS
WHERE
    TAS.CRY_ARIMP_CRY_CD = :bta_cry_arimp_cry_cd
AND
    TAS.STN_STN_ID = :bta_stn_stn_id
AND
    TAS.SCNTN_STN_CNTR_ID = :bta_scntr_stn_cntr_id
AND
    TRUNC( TO_DATE( :s_co_date, 'YYYYMMDDHH24MI' ))
BETWEEN
    TAS.EFF_DT
AND
    NVL( TAS.STOP_DT, TO_DATE( :g_end_dt, 'DD-MON-YYYY HH24:MI:SS' ) )
```

This change will ensure that only the hierarchy that was in effect for the branch at the time of open ticket would be used to retrieve surcharges applicable.

## 2.2.7 Gap 29: Need the ability to track all changes to Surcharge & Tax data

### Gap Description:

Enterprise has standard audit columns they use on all tables to track change history. We need to add these columns to several of the tables being ported from the VRS data model to the Enterprise data model.

### Solution:

Four columns will be added to each of the tax and surcharge tables.

1. Create Date & Time stamp
2. Create User Id
3. Last update Date & Time stamp
4. Last update user Id

Any process, which updates these tables, needs to update these columns. This does not impact the surcharge engine directly as it does not update any tables. See the DDL changes section for actual table changes proposed.

## 2.2.8 Gap 31: Provide minimum and maximum vehicle license fee per day

### Gap Description:

System must provide both minimum and maximum daily vehicle license fee surcharge amounts.

### Solution:

Currently in VRS, both minimum and maximum values are maintained, but only the maximum is returned. The code will be modified to return both the minimum and maximum surcharge parameters. Both elements already exist in the output parameter list.

In VRS, if the specific vehicle unit number is not provided, the surcharge engine will calculate surcharge amount based on the maximum per day amount from the DVC\_ST\_SCHGS table. If the unit number is provided but VLF amounts are not passed via API, then surcharge is calculated based on minimum per day VLF amount from the table.

The logic and format the surcharge engine uses in returning the vehicle license fees has changed. Instead of returning these values through existing output parameters as one line item, the surcharge engine will be changed as follows:



- At reservation time, when a specific vehicle is not attached to the rental, return both minimum and maximum per day license fee amounts as two separate line items from the surcharge engine. Both will have the activity flag set to 'NS' to indicate to the charge engine not to include these items in the calculation of rental charges. The minimum per day amount will be copied into the surcharge rate for one line item and the maximum per day amount for the other. Both line items will have the same surcharge id.
- At rental time, when a specific vehicle is attached to the rental but no license fee details are available, return only one line item from the surcharge engine for the license fee surcharge, using minimum per day amount to calculate the actual surcharge amount. In this case, the activity flag will be set to 'AS' to indicate to the charge engine to include this item in the calculation of rental charges.

## 2.2.9 Gap 141: Surcharges & Taxes based on Registration for North and South Carolina vehicles

### Gap Description:

This gap concerns the Motor Vehicle Highway Tax (MVHT) which some states have. Some states give the option of either prepaying this tax at vehicle purchase time or collecting the tax as the vehicle is rented and remitting the tax to the government. Currently Enterprise uses the first method only in North Carolina. That is, as vehicles are purchased in North Carolina, the MVHT is prepaid to the government. Enterprise recoups this money using a surcharge as these vehicles are rented. However, non-NC vehicles are also rented in NC. These vehicles have not had the NC MVHT prepaid, but the tax is still applicable. For these rentals, the tax must be charged and remitted to the government. So both the tax and the surcharge must be set up, but only one should ever be applied. This situation could arise for other states as well if Enterprise chooses to use the prepay option in other states that offer it.

Special consideration must be given when vehicle owning state is unknown. This can occur, for example, with "Z units" (vehicles not fully installed and lacking in registration details.) Enterprise needs the capability to specify, through data set up, whether the tax or surcharge should be applied in these cases.

Solution:

A new attribute, state code, will be added to the calculation rules table. Both the surcharge and the tax will get set up as surcharges (*resulting in two rows in the schg\_cds table*) and will utilize two new calculation rules. These new calculation rules would use new base type values, such as 'STSC' and 'STTX', to attach to the surcharge and tax respectively. These rules would also utilize the new state column to determine the state in which the MVHT has been prepaid. Vehicle owning state is one of the surcharge engine inputs. The surcharge engine will compare the vehicle owning state (via the API) to the state code of these rules to determine which to apply. If the owning state passed in is unknown (blank) the "Re-calc" field will be used to determine which to apply, the tax or the surcharge. If this field is blank or 'N' then the surcharge will be applied. If the field is 'Y' the tax will apply. Following are four examples showing various possibilities:

(Note: The first table in each example shows the surcharge and tax setup in the schg\_cds table. A separate surcharge code for each allows for distinct naming and reporting to the general ledger. The second table depicts the data as setup in the calc\_rls table.)

Example 1: Here if the vehicle owning state is either unknown or 'NC', then the surcharge will be assessed; otherwise the tax will be assessed.

**SCHG CDS**

Schg_Id	Eff_Dt	Dsply_Ln1	Rule_Id	Schg_Typ
141S01	01/01/01	NC MVHT surcharge	1	LEGL
141S02	01/01/01	NC MVHT tax	2	STAX

**CALC RLS**

Rule ID	Rule Value	Rule Type	Based On	Charge Per	State Code	Re-calc
1	2.00	\$	STSC	RDYS	NC	N
2	4	%	STTX	RNTL	NC	N

Example 2: In this example, for Nevada, the surcharge gets assessed only if the vehicle owning state is 'NV'. If it is unknown or some other state, the tax gets assessed.

**SCHG CDS**

Schg_Id	Eff_Dt	Dsply_Ln1	Rule_Id	Schg_Typ
141S03	01/01/01	NV MVHT surcharge	3	LEGL
141S04	01/01/01	NV MVHT tax	4	STAX

**CALC RLS**

Rule ID	Rule Value	Rule Type	Based On	Charge Per	State Code	Re-calc
3	2.00	\$	STSC	RDYS	NV	Y
4	4	%	STTX	RNTL	NV	Y

It is important at this point to note that the "Re-calc" field should be set the same for both the tax and the surcharge in a given state. The engine will use that value to determine what to apply in the event the vehicle owning state is not known. The next two examples show the ambiguity that arises when these flags are not the same and indicates how the engine will handle it. The logic is detailed in the pseudo code that follows the examples.

Example 3: In this example, now for Maryland, everything is still fine except in the event of an unknown vehicle owning state. The "Re-calc" value has been set up ambiguously; the empty value on the surcharge line indicates it is the default, but the 'Y' on the tax line indicates *it* is the default. In this case, the engine will assess whichever one it encounters first. It will not assess both, but simply ignore whichever is second.

### SCHG CDS

Schg_Id	Eff_Dt	Dsply_Ln1	Rule_Id	Schg_Typ
141S05	01/01/01	MD MVHT surcharge	5	LEGL
141S06	01/01/01	MD MVHT tax	6	STAX

### CALC RLS

Rule ID	Rule Value	Rule Type	Based On	Charge Per	State Code	Re-calc
5	2.00	\$	STSC	RDYS	MD	N
6	4	%	STTX	RNTL	MD	Y

Example 4: In this Pennsylvania example, as with #3, everything is still fine except in the event of an unknown vehicle owning state. The "Re-calc" value is ambiguous here in precisely the opposite way as example 3. Here both lines are indicating that the *other* should be assessed when vehicle owning state is unknown. In this case neither the tax nor surcharge will be assessed.

### SCHG CDS

Schg_Id	Eff_Dt	Dsply_Ln1	Rule_Id	Schg_Typ
141S07	01/01/01	PA MVHT surcharge	7	LEGL
141S08	01/01/01	PA MVHT tax	8	STAX

### CALC RLS

Rule ID	Rule Value	Rule Type	Based On	Charge Per	State Code	Re-calc
7	2.00	\$	STSC	RDYS	PA	Y
8	4	%	STTX	RNTL	PA	N

### Notes:

To support this solution, the front-end screens must allow maintenance to the Re-calc field when a calc rule with base type 'STSC' or 'STTX' is being set up. This is the mechanism by which a user can indicate which to apply in the event of an unknown vehicle owning state.

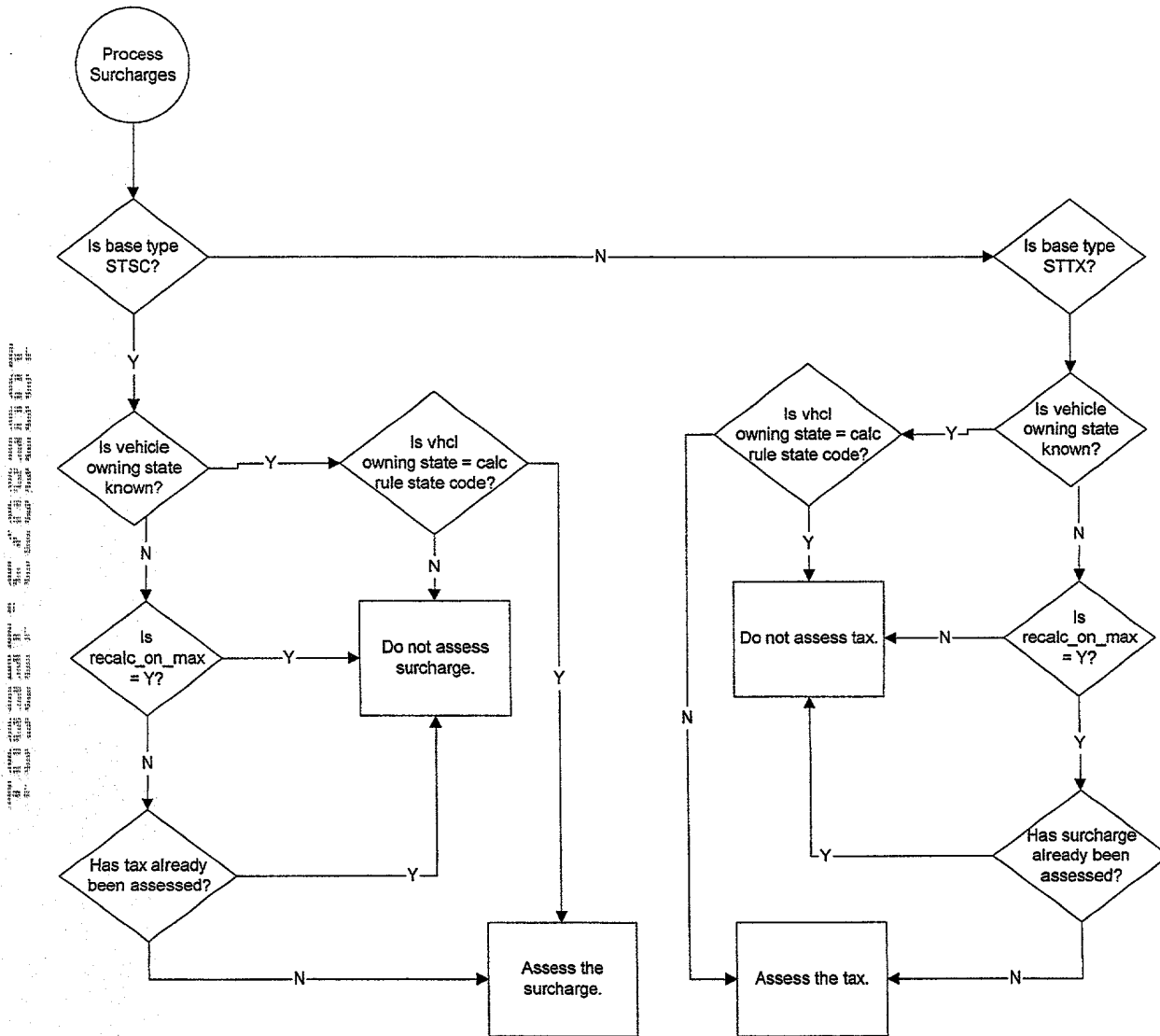
Examples 3 and 4 represent ambiguous data situations and seem hardly ideal. The front-end screens could possibly control this if desired. Other business rules could also be defined, such as "Always default the surcharge in these cases". The assumptions used here are that you should never assess both the tax and the surcharge (example 3) and assessing neither is OK (example 4).

Pseudo code:

```
IF base type = 'STSC'
    IF vehicle owning state unknown
        IF recalc = 'Y'
            Do not assess the schg
        ELSE
            IF tax already assessed
                Do not assess the schg
                Userlog a message for conflicting data
            ELSE
                Assess the schg
            ENDIF
        ENDIF
    ELSE
        IF vehicle owning state = calc rule state
            Assess the schg
        ELSE
            Do not assess the schg
        ENDIF
    ENDIF
ENDIF

IF base type = 'STTX'
    IF vehicle owning state unknown
        IF recalc = 'Y'
            IF schg already assessed
                Do not assess the tax
                Userlog a message for conflicting data
            ELSE
                Assess the tax
            ENDIF
        ELSE
            Do not assess the tax
        ENDIF
    ELSE
        IF vehicle owning state = calc rule state
            Do not assess the tax
        ELSE
            Assess the tax
        ENDIF
    ENDIF
ENDIF
```

Flow Chart:



## 2.3 Database Table Impacts

To calculate applicable surcharges for a given charge type, the surcharge engine uses a set of database tables to obtain all necessary information pertaining to surcharge hierarchy definitions for each branch, applicable surcharges in the given area, calculation rules etc. Please refer to *Appendix B* for an entity relationship diagram of the data model used by the surcharge engine.

The following sections outline the DDL changes that are required to address all the gaps in this document. Changes are indicated by highlighted text.

### 2.3.1.1 BIL\_TAS\_AREAS Table

This table stores all the hierarchy information in the form of a flat line for every branch that would have surcharges to be calculated. This table is being changed to address gaps 25 and 27 mentioned in 'Gaps Addressed Summary' section at the top of this document.

#### Columns:

STN_STN_ID	NOT NULL	VARCHAR2(10)
CRY_ARIMP_CRY_CD	NOT NULL	VARCHAR2(2)
STPR_ID	NOT NULL	VARCHAR2(10)
GRP_ID	NOT NULL	VARCHAR2(10)
COUN_ID	NOT NULL	VARCHAR2(10)
CITY_ID	NOT NULL	VARCHAR2(10)
DIST_ID	NOT NULL	VARCHAR2(10)
SCNTR_STN_CNTR_ID	NOT NULL	VARCHAR2(1)
BIL_TAS_AREAS_EFF_DTE	NOT NULL	DATE
BIL_TAS_AREAS_XPR_DTE	NULL	DATE
RECORD_STATUS	NULL	VARCHAR2(2)
CREATE_BY	NOT NULL	VARCHAR2(30)
CREATE_TIMESTAMP	NULL	DATE
CREATE_MODULE	NULL	VARCHAR2(1024)
UPDATE_TIMESTAMP	NULL	DATE
UPDATE_BY	NULL	VARCHAR2(30)
UPDATE_MODULE	NULL	VARCHAR2(1024)

#### Primary Key:

STN\_STN\_ID, SCNTR\_STN\_CNTR\_ID, BIL\_TAS\_AREAS\_EFF\_DTE

### 2.3.1.2 STN\_CNTR Table

This table associates a given station to the user defined area to which it belongs.

Columns:

STN_STN_ID	NOT NULL	VARCHAR2(10)
STN_CNTR_ID	NOT NULL	VARCHAR2(1)
STN_CNTR_NM	NOT NULL	VARCHAR2(30)
UDA_AREA_ID	NULL	VARCHAR2(10)
UDA_ATY_AREA_TYP	NULL	VARCHAR2(10)
STN_CNTR_EFF_DTE	NOT NULL	DATE
STN_CNTR_XPR_DTE	NULL	DATE
RECORD_STATUS	NULL	VARCHAR2(2)
CREATE_BY	NOT NULL	VARCHAR2(30)
CREATE_TIMESTAMP	NULL	DATE
CREATE_MODULE	NULL	VARCHAR2(1024)
UPDATE_TIMESTAMP	NULL	DATE
UPDATE_BY	NULL	VARCHAR2(30)
UPDATE_MODULE	NULL	VARCHAR2(1024)

Primary Key:

STN\_STN\_ID, STN\_CNTR\_ID, STN\_CNTR\_EFF\_DTE

### 2.3.1.3 SCHG\_CDS table

This table is used to maintain surcharges for different areas that are defined in the taxes and surcharge hierarchy.

Columns:

SCHG_ID	NOT NULL	VARCHAR2(15)
EFF_DT	NOT NULL	DATE
CRY_ARIMP_CRY_CD	NOT NULL	VARCHAR2(2)
EXMPT_IND	NOT NULL	VARCHAR2(1)
PRNT_EXMPT_MSG_FLG	NOT NULL	VARCHAR2(1)
RNTL_CAP_AMT	NOT NULL	NUMBER(15,2)
SCHG_NAM	NULL	VARCHAR2(35)
SCHG_SEQ	NOT NULL	NUMBER(3)
SCTYP_SCHG_TYP	NOT NULL	VARCHAR2(4)
SUSP_IND	NOT NULL	VARCHAR2(1)
UDA_AREA_ID	NOT NULL	VARCHAR2(10)
UDA_ATY_AREA_TYP	NOT NULL	VARCHAR2(10)
YRLY_CAP_AMT	NOT NULL	NUMBER(15,2)
CRLS_RULE_ID	NULL	VARCHAR2(6)
DSPLY_LN1	NULL	VARCHAR2(35)
DSPLY_LN2	NULL	VARCHAR2(35)
EXMPT_MSG	NULL	VARCHAR2(35)
GLT_SEQ	NULL	NUMBER(6)
RECORD_STATUS	NULL	VARCHAR2(2)
CREATE_BY	NOT NULL	VARCHAR2(30)
CREATE_TIMESTAMP	NULL	DATE
CREATE_MODULE	NULL	VARCHAR2(1024)
UPDATE_TIMESTAMP	NULL	DATE
UPDATE_BY	NULL	VARCHAR2(30)
UPDATE_MODULE	NULL	VARCHAR2(1024)
RATE_DESC	NULL	VARCHAR2(4)

RCT_CHG_TYP	NULL	VARCHAR2(5)
SCHG_USR_NOTES	NULL	VARCHAR2(100)
STOP_DT	NULL	DATE
YTD_SCHG_AMT	NULL	NUMBER(15,3)
WALKIN_EXMPT_FLG	NOT NULL	VARCHAR2(1)
RNTL_MIN_AMT	NULL	NUMBER(15,2)

#### 2.3.1.4 CALC\_RLS Table

This table is used to define rules for calculating surcharges. A surcharge id is always associated to a calculation rule. One calculation rule may be applied to multiple surcharges. Rate is part of the calculation rule.

##### Columns:

RULE_ID	NOT NULL	VARCHAR2(6)
BASE_TYPE	NOT NULL	VARCHAR2(4)
MIN_UOB_VAL	NOT NULL	NUMBER(15,3)
RECALC_ON_MAX	NOT NULL	VARCHAR2(1)
RULE_TYPE	NOT NULL	VARCHAR2(4)
RULE_VAL	NOT NULL	NUMBER(15,3)
UNIT_OF_CHRG	NOT NULL	VARCHAR2(4)
KEEP_PCT	NULL	NUMBER(5,2)
MAX_CHRG_VAL	NULL	NUMBER(15,3)
MAX_UOB_VAL	NULL	NUMBER(15,3)
MIN_CHRG_VAL	NULL	NUMBER(15,3)
REIMB_PCT	NULL	NUMBER(5,2)
RULE_ID_AT_MAX	NULL	VARCHAR2(6)
UNIT_OF_BASE	NULL	VARCHAR2(4)
VCA_CAT_CD	NULL	VARCHAR2(8)
CAR_CLS_SUF_X_CDE	NULL	VARCHAR2(4)
RECORD_STATUS	NULL	VARCHAR2(2)
CREATE_BY	NOT NULL	VARCHAR2(30)
CREATE_TIMESTAMP	NULL	DATE
CREATE_MODULE	NULL	VARCHAR2(1024)
UPDATE_TIMESTAMP	NULL	DATE
UPDATE_BY	NULL	VARCHAR2(30)
UPDATE_MODULE	NULL	VARCHAR2(1024)
CNTRY_ISO_CDE	NULL	VARCHAR2(6)
CNTRY_SUBDIV_SHRT_NAM	NULL	VARCHAR2(12)

#### 2.3.1.5 SCHG\_CHG\_TYPS Table

This table stores all surcharge codes that are associated with each charge type

##### Columns:

SCHG_EFF_DT	NOT NULL	DATE
RCT_CHG_TYP	NOT NULL	VARCHAR2(5)
LINE_NBR	NOT NULL	NUMBER(2)
INCL_BASE_AMT	NOT NULL	VARCHAR2(1)
SCHG_ON_LINE	NOT NULL	NUMBER(2)
SCHG_SCHG_ID	NOT NULL	VARCHAR2(15)
SEQ_NBR	NOT NULL	NUMBER(3)
RECORD_STATUS	NULL	VARCHAR2(2)
CREATE_BY	NOT NULL	VARCHAR2(30)
CREATE_TIMESTAMP	NULL	DATE



CREATE_MODULE	NULL	VARCHAR2(1024)
UPDATE_TIMESTAMP	NULL	DATE
UPDATE_BY	NULL	VARCHAR2(30)
UPDATE_MODULE	NULL	VARCHAR2(1024)

### 2.3.1.6 SCHG\_TYPS Table

This table is used to store surcharge types. A surcharge type is used to classify surcharges into multiple categories. Multiple surcharge ID's can be grouped under one surcharge type.

Columns:

SCHG_TYP	NOT NULL	VARCHAR2(4)
RCT_CHG_TYP	NOT NULL	VARCHAR2(5)
OPTN_IND	NULL	VARCHAR2(1)
SCHG_TYP_DESC	NULL	VARCHAR2(35)
RECORD_STATUS	NULL	VARCHAR2(2)
CREATE_BY	NOT NULL	VARCHAR2(30)
CREATE_TIMESTAMP	NULL	DATE
CREATE_MODULE	NULL	VARCHAR2(1024)
UPDATE_TIMESTAMP	NULL	DATE
UPDATE_BY	NULL	VARCHAR2(30)
UPDATE_MODULE	NULL	VARCHAR2(1024)

### 2.3.1.7 DVC\_ST\_SCHGS Table

This table is used to maintain minimum and maximum surcharges for vehicle categories for a state. The surcharge range can be applicable for a given range of dates. This information will be used for assessing surcharges ONLY IF the vehicle unit number is not available at the time of assessment. Adding Group to this table is a new functionality to support Enterprise needs.

Columns:

DVC_CRY_ARIMP_CRY_CD	NOT NULL	VARCHAR2(2)
DVC_VCA_CAT_CD	NOT NULL	VARCHAR2(8)
CAR_CLS_SUFEX_CDE	NOT NULL	VARCHAR2(4)
ST_STATE_CD	NOT NULL	VARCHAR2(6)
STRT_DT	NOT NULL	DATE
MAX_SCHG_AMT	NOT NULL	NUMBER(15,3)
MIN_SCHG_AMT	NOT NULL	NUMBER(15,3)
EXPR_DT	NULL	DATE
GRP_ID	NOT NULL	VARCHAR2(10)
RECORD_STATUS	NULL	VARCHAR2(2)
CREATE_BY	NOT NULL	VARCHAR2(30)
CREATE_TIMESTAMP	NULL	DATE
CREATE_MODULE	NULL	VARCHAR2(1024)
UPDATE_TIMESTAMP	NULL	DATE
UPDATE_BY	NULL	VARCHAR2(30)
UPDATE_MODULE	NULL	VARCHAR2(1024)

### 2.3.1.8 CON\_SCHG\_TYPS Table

This table will be used for defining contract exemptions. Contracts will be exempted from surcharge surcharge types. All the surcharges that fall under the surcharge types will be exempted.

Columns:

CON_CON_ID	NOT NULL	NUMBER(8)
SCTYP_SCHG_TYP	NOT NULL	VARCHAR2(4)
EFF_DT	NOT NULL	DATE
END_DT	NULL	DATE
RECORD_STATUS	NULL	VARCHAR2(2)
CREATE_BY	NOT NULL	VARCHAR2(30)
CREATE_TIMESTAMP	NULL	DATE
CREATE_MODULE	NULL	VARCHAR2(1024)
UPDATE_TIMESTAMP	NULL	DATE
UPDATE_BY	NULL	VARCHAR2(30)
UPDATE_MODULE	NULL	VARCHAR2(1024)

### 2.3.1.9 SCHG\_EXMPT\_CDS Table

This table is used to associate surcharges to the exempted ZIP codes. If a renters ZIP code matches any of the exempted ZIP codes, then the renter will automatically be exempted from the surcharges that are linked to the ZIP code.

Columns:

SCHG_SCHG_ID	NOT NULL	VARCHAR2(15)
SCHG_EFF_DT	NOT NULL	DATE
EZC_ZIP_CD	NOT NULL	NUMBER(9)
RECORD_STATUS	NULL	VARCHAR2(2)
CREATE_BY	NOT NULL	VARCHAR2(30)
CREATE_TIMESTAMP	NULL	DATE
CREATE_MODULE	NULL	VARCHAR2(1024)
UPDATE_TIMESTAMP	NULL	DATE
UPDATE_BY	NULL	VARCHAR2(30)
UPDATE_MODULE	NULL	VARCHAR2(1024)

### 2.3.1.10 EXMPT\_ZIP\_CDS Table

This table maintains all the ZIP codes that are eligible for surcharge exemptions. Exemptions related to ZIP code are also called as local exemptions.

Columns:

ZIP_CD	NOT NULL	NUMBER(9)
EZC_DESC	NOT NULL	VARCHAR2(35)
RECORD_STATUS	NULL	VARCHAR2(2)
CREATE_BY	NOT NULL	VARCHAR2(30)
CREATE_TIMESTAMP	NULL	DATE
CREATE_MODULE	NULL	VARCHAR2(1024)
UPDATE_TIMESTAMP	NULL	DATE
UPDATE_BY	NULL	VARCHAR2(30)
UPDATE_MODULE	NULL	VARCHAR2(1024)

### 2.3.1.11 XMPT\_RENT\_SCHG Table

This is a new table added to the data model to support Enterprise needs. This table maintains all the exempted surcharge codes based on rental type code.

Columns:

SCHG_ID	NOT NULL	VARCHAR2(15)
EFF_DTE	NOT NULL	DATE
XMPT_SCHG_XPR_DTE	NULL	DATE
RENT_TYP_CDE	NOT NULL	NUMBER(6)
RECORD_STATUS	NULL	VARCHAR2(2)
CREATE_BY	NOT NULL	VARCHAR2(30)
CREATE_TIMESTAMP	NULL	DATE
CREATE_MODULE	NULL	VARCHAR2(1024)
UPDATE_TIMESTAMP	NULL	DATE
UPDATE_BY	NULL	VARCHAR2(30)
UPDATE_MODULE	NULL	VARCHAR2(1024)

Primary Key:

SCHG\_SCHG\_ID, EFF\_DTE, RNTL\_TYP\_CDE

Foreign Key:

SCHG_ID	references	SCHG_CDS.SCHG_ID
EFF_DT	references	SCHG_CDS.EFF_DT

### 2.3.1.12 AREA\_RLTNS

This table holds the parent/child relationships between area ids.

Columns:

UDA_ATY_AREA_TYP_PRNT	NOT NULL	VARCHAR2(10)
UDA_ATY_AREA_TYP_CHLD	NOT NULL	VARCHAR2(10)
UDA_AREA_ID_PRNT	NOT NULL	VARCHAR2(10)
UDA_AREA_ID_CHLD	NOT NULL	VARCHAR2(10)
RECORD_STATUS	NULL	VARCHAR2(2)
CREATE_BY	NOT NULL	VARCHAR2(30)
CREATE_TIMESTAMP	NULL	DATE
CREATE_MODULE	NULL	VARCHAR2(1024)
UPDATE_TIMESTAMP	NULL	DATE
UPDATE_BY	NULL	VARCHAR2(30)
UPDATE_MODULE	NULL	VARCHAR2(1024)

### 2.3.1.13 AREA\_TYPS

This table holds the valid area types for area ids with descriptions of each.

Columns:

AREA_TYP	NOT NULL	VARCHAR2(10)
AREA_TYP_ACT	NOT NULL	VARCHAR2(3)
AREA_TYP_DESC	NULL	VARCHAR2(35)
AREA_TYP_SHRT_DESC	NULL	VARCHAR2(10)
HIERARCHY_LVL	NULL	NUMBER(2)
DATES_REQ_FLG	NULL	VARCHAR2(1)
RECORD_STATUS	NULL	VARCHAR2(2)
CREATE_BY	NOT NULL	VARCHAR2(30)
CREATE_TIMESTAMP	NULL	DATE

CREATE_MODULE	NULL	VARCHAR2(1024)
UPDATE_TIMESTAMP	NULL	DATE
UPDATE_BY	NULL	VARCHAR2(30)
UPDATE_MODULE	NULL	VARCHAR2(1024)

## 2.4 Inputs

The surcharge engine is a Tuxedo based server that services request from the caller. Surcharge API will process the requests from the callers and pass the requests to the engine and then present surcharges and descriptions to caller applications. The input buffer is defined below with items under the FML field name column shown in BOLD are added to address gaps.

<b>Surcharge Engine Input Parameters</b>						
<b>Input Parameter</b>	<b>Description</b>	<b>FML Field Name</b>	<b>Mandatory</b>	<b>Type</b>	<b>Size</b>	<b>Source of Data</b>
Standard Header	The content of this header will be used for debugging, user test support, performance monitoring, tuning and error logging	Refer to standard header document for layout and population rules	Yes			All Clients
view version	View Version string	FN VIEW VERSION	Yes	string	100	Tux View
co cry cd	Pick-up country code	FN SCHG CO COUNTRY_CD	Yes	string	3	Client App
co date	Pick up date stamp	FN SCHG CO TIMESTAMP	Yes	string	13	Client App
ci date	Return date stamp	FN SCHG CI TIMESTAMP	Yes	string	13	Client App
co stn	Pick-up branch Id	FN SCHG CO STN ID	Yes	string	7	Client App
co_state_cd	State code for Pick-up branch	FN SCHG CO_STATE_CD	Yes	string	3	Client App
chg typ	Charge/ product type	FN SCHG CHG TYP	Yes	string	6	Client App
chg amt	Charge amount	FN SCHG AMT	Yes	double		Client App
vhcl cat cd	Vehicle category	FN SCHG CAT_CD	Yes	string	9	Client App
vhcl unit nbr	Vehicle unit number	FN SCHG VHCL UNIT_NBR	No	long		Client App
vhcl_own_st	Vehicle registration state	FN SCHG VHCL_OWN_STAT E	No	string	3	Client App
zip_cd	Zip code of renter - required for some local exemptions	FN SCHG ZIP_CD	No	long	4	Client App
tx exempt flag	Tax exemption flag	FN SCHG EXEMPT_FLAG	No	char	1	Client App
con id	Contract Id with customer	FN SCHG CON ID	No	long	4	Client App
rntl days	Total duration in days	FN SCHG RNTL_DAYS	Yes	long	4	Client App
base days	Base days	FN SCHG BASE_DAYS	No	long	4	Client App
extra days	Extra days	FN SCHG EXTRA_DAYS	No	long	4	Client App
extension days	Extension days	FN SCHG EXTENSION_DAYS	No	long	4	Client App
counter id	Counter Id of the Branch	FN SCHG COUNTER_ID	Yes	char	1	Client App
walkin_flg	Walk-in Rental indicator, (Y=Walk-in, N=Fly-in)	FN SCHG WALKIN_FLG	No	char	1	Client App
waive_arpt_fee_flg	Y/N=Charge/Don't charge airport concession fee	FN SCHG_WAIVE_ARPT_FEE_FLG	No	char	1	Client App
vhcl weight	Vehicle Wt in tons	FN SCHG VHCL_WT	No	double	8	Client App
vhcl price	Vehicle Price	FN SCHG VHCL_PRICE	No	double	8	Client App
total annual VLF	Vehicle Reg cost/license	FN SCHG_VLF_CST	No	double	8	Client App

<b>Surcharge Engine Input Parameters</b>						
<b>Input Parameter</b>	<b>Description</b>	<b>FML Field Name</b>	<b>Mandatory</b>	<b>Type</b>	<b>Size</b>	<b>Source of Data</b>
	fee paid					
vhcl_reg_exp_dt	Vehicle registration expiry date	FN_SCHG_VHCL_REG_EXPR N_TMSP	No	string	9	Client App
vhcl_type	Vehicle Type, CR=Car, TR=Truck	FN_SCHG_VHCL_TYPE	No	string	3	Client App
vhcl_reg_cry	Vehicle registration country	FN_SCHG_VHCL_REG_CRY	No	string	3	Client App
accumulated_VLF	Accumulated vehicle license fee	FN_SCHG_ACC_VLF_FEE	No	double	8	Client App
vhcl_engine_size	Vehicle Engine size	FN_SCHG_VHCL_ENG_SIZE	No	double	8	Client App
car_cls_sufx_cde	Vehicle class suffix	FN_SCHG_VHCL_CLASS_SFX	No	String	5	Client App
rent_typ_cde	Rental type code, codes I, D, B, or F are considered replacement rentals	FN_SCHG_RNTL_TYP_CDE	Yes	Char	1	Client App

## 2.5 Outputs

The surcharge engine inserts all applicable surcharge details into the Tuxedo output buffer and returns to the caller process. The calculated surcharge items will not be directly recorded into the database by the surcharge engine. It is the calling processes' responsibility to manage the database transaction – the surcharge engine does no commits or rollbacks. The output buffer is defined below. The items under the "FML field name" column in BOLD are added to the output to address gaps for Enterprise project

<b>Surcharge Engine Output Parameters</b>					
<b>Output Parameter</b>	<b>Description</b>	<b>FML Field Name</b>	<b>Type</b>	<b>Size</b>	<b>Source of Data</b>
err_cd	Error Code	FN_SCHG_ERR_CD	long	4	SE
err_msg[36]	Error message	FN_SCHG_ERR_MSG	char	81	SE
Num_schgs	Number of surcharges returned	FN_SCHG_NUM_SCHGS	long	4	SE
Schg_id[64][16]	Surcharge Identifiers	FN_SCHG_SCHG_ID	char	16	SE
eff_dt[64][13]	Effective date for each surcharge	FN_SCHG_EFF_DT	char	13	SE
Schg_basis[64]	Base amount used for Calculating	FN_SCHG_SCHG_BASIS	double	8	SE
Schg_rate[64]	Surcharge Rate applied to product	FN_SCHG_SCHG_RT	double	8	SE
Schg_rate_type[64]	Rate type - Rental, Daily, Percent (actual values \$ Or %)	FN_SCHG_SCHG_RT_TYPE	char	1	SE
Schg_amt[64]	Surcharge Amount	FN_SCHG_SCHG_AMT	double	8	SE
Chg_unit[64]	Surcharge units charged	FN_SCHG_CHG_UNIT	long	4	SE
dsply_ln1[64][36]	Surcharge Display line 1	FN_SCHG_DSPLY_LN1	char	36	SE
dsply_ln2[64][36]	Surcharge Display line 2	FN_SCHG_DSPLY_LN2	char	36	SE
glt_seq[64]	GL code to be used for posting	FN_SCHG_GLT_SEQ	long	4	SE
Min_vhcl_schg[64]	Minimum vehicle surcharge per day	FN_SCHG_MIN_VHCL_SCHG	double	8	SE
Max_vhcl_schg[64]	Maximum vehicle surcharge per day	FN_SCHG_MAX_VHCL_SCHG	double	8	SE
exmpt_msg[64][36]	Exemption message	FN_SCHG_EXMPT_MSG	char	36	SE

<b>Surcharge Engine Output Parameters</b>					
<i>Output Parameter</i>	<i>Description</i>	<i>FML Field Name</i>	<i>Type</i>	<i>Size</i>	<i>Source of Data</i>
rct_chg_typ[64][6]	Surcharge type code	FN_SCHG_RCT_CHG_TYP	char	6	SE
act_flg[64][3]	Charge activity code AS=Display, NN=No Display	FN_SCHG_ACT_FLG	char	3	SE
parent_index[64]	Is this a surcharge on another surcharge? = -1 otherwise	FN_SCHG_PARENT_INDEX	long	4	SE
Incl_chg_basis[64]	Product base amount included for calculating surcharge (Y/N)	FN_SCHG_INCL_CHG_BASIS	char	1	SE
sctyp_schg_typ[64][5]	Surcharge Type, OPTL, LEGL etc.,	FN_SCHG_SCTYP_SCHG_TYP	char	5	SE
rntl_min_amt	Minimum surcharge per rental	FN_SCHG_RNTL_MIN_AMT	double	8	SE

### Sample Input/Output from Surcharge Engine

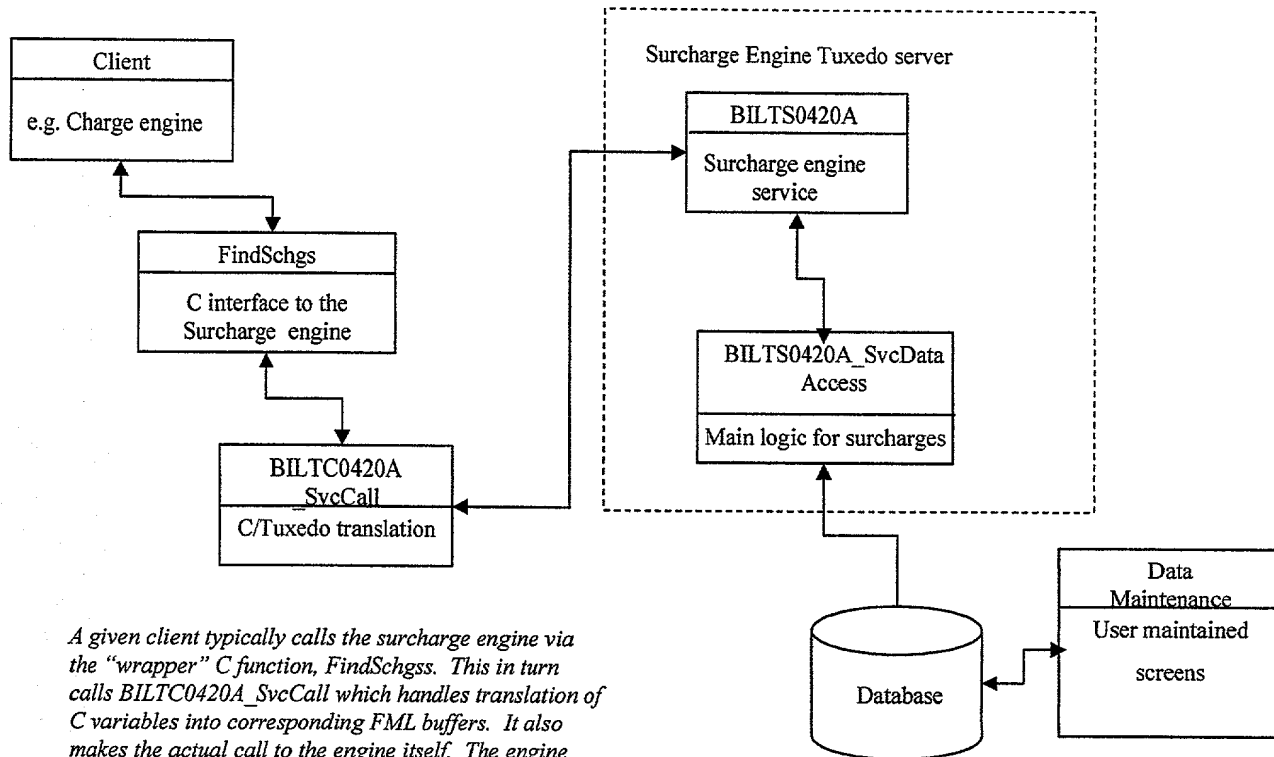
The following is an example of output produced by the surcharge engine for a given set of input values:

<b>INPUTS</b>	
Country Code	US
Checkout Date	200105200000
Checkin Date	200105260000
Branch ID	STLT01
Charge Type	00001
Charge Amount	100.000
Vhcl. Cat. Code	FCAR
Vhcl. Unit #	1587021
Vhcl. Own State	MN
Renter Zip Cd	0
Tax Exempt	N
Contract ID	0
Rental Days	3
Base Days	0
Extra Days	0
Extension Days	0
Counter Id	1
Walkin Flag	
Waive Arpt Fee	N

OUTPUTS		
ERR CD	0	0
ERR MSG		
NUM SCHGS	2	2
SCHG ID	US4STARP1	US4STARP2
EFF DT	19980707	20000802
STYP	OPTL	VREG
BASIS	100.000	110.000
RATE	10.000	2.500
RATE TYPE	C	C
SCHG AMT	10.000	2.750
ACTIVITY FLAG	AS	AS
CHG UNT	1	1
DISPLYLN1	CONCESSION RECOUPMENT FEE 10 PCT	REGISTRATION RECOUP FEE 2.50 PCT
DISPLYLN2		
MIN VHCL SCHG		
MAX VHCL SCHG		
GLT SEQ	445	745
CHG TYP	00025	00074
PARENT INDEX	-1	0
INC CHG BASIS	N	Y
EXEMPT MSG		

## 2.6 Detailed Process Flow

The following picture illustrates the high level view of surcharge engine.



Each of the main components of the surcharge engine depicted above is discussed below.

### FindSchgs:

This function will initiate a call to the surcharge service for a given branch and charge type. The surcharge service will return all applicable surcharges in a structure. FindSchgs itself is a pure C function and is called as such. All the Tuxedo specifics are managed by FindSchgs and the follow on routines it calls. This insulates client developers from the need to have specific knowledge about Tuxedo. As far as clients are concerned, this function is the API to the surcharge engine. The inputs and outputs of this function are given in the inputs and outputs sections of this document.



**BILTC0420A\_SvcCall:**

This function handles manipulation of 'C' variables into Tuxedo buffers and makes the actual Tuxedo call to the surcharge engine. Outputs from the engine are converted back to typical C variables and returned. Use of this function by FindSchgs frees clients from any need for Tuxedo expertise or manipulation.

**BILTS0420A:**

This is the actual entry point to the surcharge engine. It takes the FML32 buffer data it was passed and converts this back to VIEW32 format in order to pass the inputs to the database access module in more "C like" fashion. It then makes the call to the data base access module using the VIEW32 buffers. Upon return, it converts the VIEW32 output buffer to an FML32 buffer and issues a tpreturn.

**BILTS0420A\_DataAccess:**

This is the main component of the surcharge engine. At a high level, it performs two basic functions, 1) determines the applicable surcharges and 2) calculates the amounts for each of these surcharges.

The engine is designed to compute surcharges for an individual charge and location. Given a ticket with three charges (e.g., time and distance, refueling, and LDW), three calls would be made to the surcharge engine to determine all surcharges for the rental by calling process. The charge engine then typically rolls all like surcharges up into single line item. Basic logic flow for the surcharge engine is given below:

```
Validate Input values to see if mandatory values are passed to engine.
Find the area hierarchy for the checkout Branch
Find all the surcharges that are:
    - associated with the input charge type
    - belong to the hierarchy.
    - active as of check out date
and load them into Array of structs to be processed one by one.

IF any surcharges loaded into Array, THEN
FOR every surcharge code in Array
DO
    Check if the renter has tax exemption and
    IF the surcharge is exemptable, THEN
        put the exemption message in the display line 1.
    IF the renter has a contract,
        and the surcharge type is exempted, THEN
        Do not process the surcharge
    IF the renter is eligible for local exemption THEN
        Do not process the surcharge
        Put the exemption message in the display line 1.
    IF based on VREG, THEN
        Get vehicle registration info.
        IF vehicle specific info is not found THEN
        Get the minimum and maximum values from DVC_ST_SCHGS table
```

```
IF the surcharge is based on Vehicle Cost (VCST) THEN
    Get vehicle cost info.
IF the surcharge is based on Vehicle type (VTYP) THEN
    Get vehicle weight info.
After all the information is gathered, calculate the surcharge
Load the surcharge details into out variables.
DONE
END IF
```

## 2.7 Calling Process Variations

The surcharge engine may be called at reservation, open ticket, close ticket, or modify ticket. Calls made at the time of reservation differ from those made at open, close, or modify ticket in that the specific vehicle to be rented may not be known. In such cases, in order to calculate vehicle based surcharges such as those for a vehicle license fee, the engine would assess surcharges based on the vehicle class information.

### 3 Key Risks, Assumptions, Issues, Dependencies

#### 3.1 Risks

There are no items at this time.

#### 3.2 Assumptions

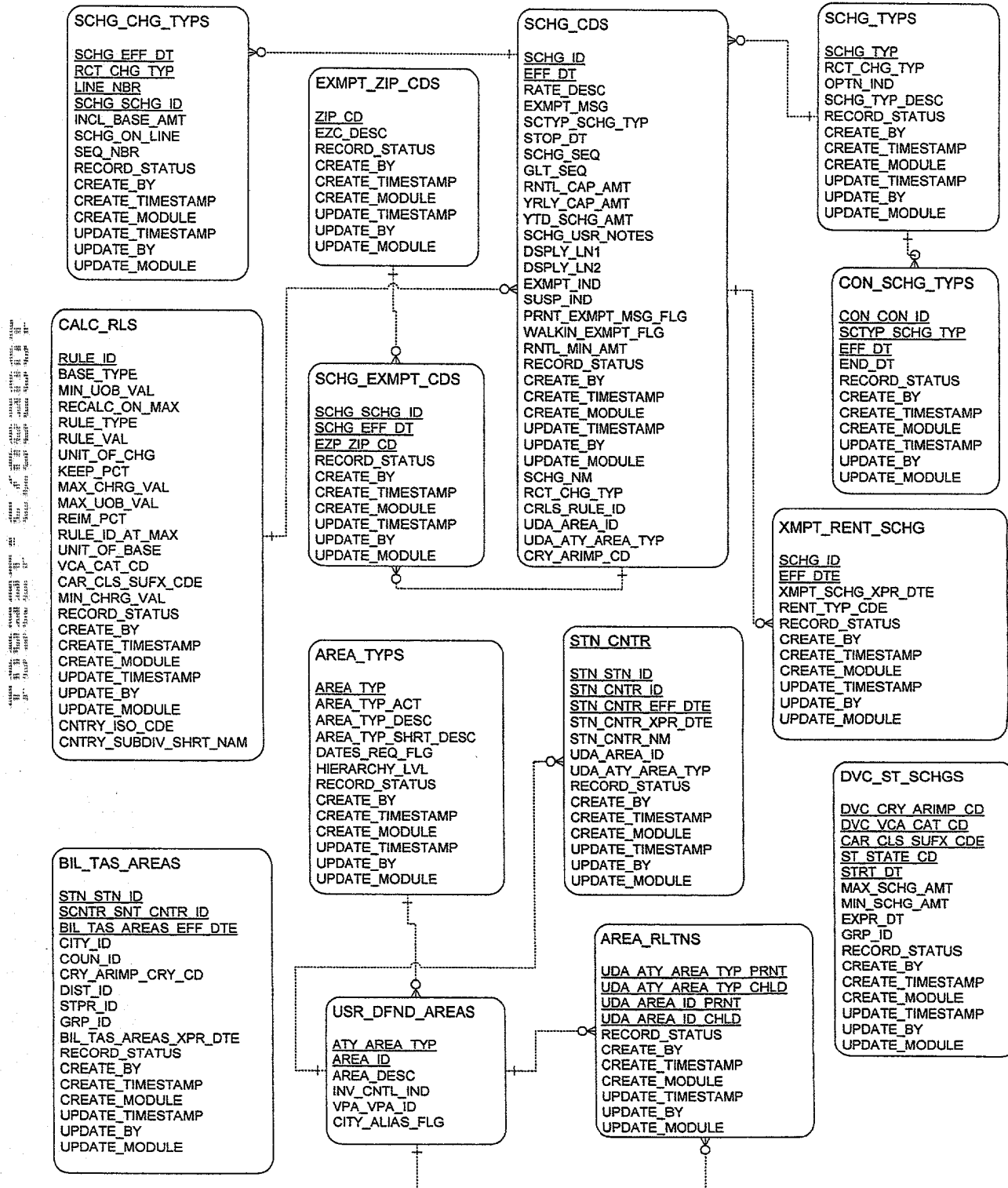
- All required vehicle information for surcharge calculations will be passed in by the client application, since the surcharge engine will not access vehicle information from the database.
- The surcharge engine does not perform any database updates. After the appropriate surcharges are calculated, they are returned to the calling process.
- For daily vehicle license fee surcharge amounts, if the specific vehicle unit number is not provided, the surcharge engine will calculate surcharge amount based on the maximum per day amount from the DVC\_ST\_SCHGS table. If the unit number is provided but VLF amounts are not passed via API, then surcharge is calculated based on minimum per day VLF amount from the table.

#### 3.3 Issues

There are no items at this time.



## 4 Appendices





ECARS V2.0  
Accurate Out the Door Pricing  
Detailed Design Specification  
Tax Engine  
Iteration 3 - Final

**perotsystems™**

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## Gaps Addressed Summary

Gap ID	Functional Area	Brief Description
22	Taxes and surcharges	Accommodate taxes and surcharges based on 'transaction type'
23	Taxes and surcharges	Accommodate varying sales tax based on vehicle type
25	Taxes and surcharges	Allow group level maintenance of taxes and surcharges
27	Taxes and surcharges	Accommodate detaching and reattaching of branches in the hierarchy
29	Taxes and surcharges	Store audit data in all tax and surcharge related tables
30	Taxes	Print tax exempt charges on invoices
141	Taxes and surcharges	Allow for taxes and surcharges based on vehicle state of registration

## Document Control

### Primary Document Owner/Domain

Issued by: (PSC)

Name	Position/Department	Signature	Date
Stacey Shewbridge			

### Customer Approval

Authorized by: (ERAC)

Name	Position/Department	Signature	Date

## Document History

Version	Date	Author	Reason for Change
1.0	06/08/01	Shane Goodrich	Initial draft of Design Document
1.1	06/14/01	Shane Goodrich	Draft revision 1 based on internal review
1.2	07/11/01	Shane Goodrich	Draft revision 2 based on internal review
1.3	07/18/01	Shane Goodrich	Draft revision 3 based on internal review
1.4	10/03/01	Shane Goodrich	Approved Design Document consolidated with published addendums.

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Tax Engine Detail Design\_I3



# 1 Introduction

## 1.1 Overview

This document details the design specifications for the tax engine component of the VRS. This covers current VRS functionality and addresses identified tax gaps targeted for iteration 3, except gap #28 – the 3<sup>rd</sup> party tax data load. Gap 28 will be detailed in its own, separate design document. As gap 28 primarily concerns tax data, data conversion aspects of taxes will be addressed in that document as well.

## 1.2 Dependencies

In order to implement the functionality addressed in this document, the processes calling the tax engine must be modified to accommodate the API changes described herein.

## 1.3 Data Conversion

There will be no conversion of tax data from the legacy systems. Rather an initial conversion of 3<sup>rd</sup> party tax data will be handled as part of Gap 28. Refer to the Gap 28 (3<sup>rd</sup> party tax load) design document for details involving tax data conversion and initial loading of tax data.

## 1.4 Impact Analysis

The current VRS version of the tax engine consists of a main tax service module and an interface (API) to this module. The engine also reads several tables from an Oracle database for retrieving tax specific data.

For Enterprise, much of the VRS code can be implemented unchanged. Most of the database tables the engine relies on are being implemented in the Enterprise system with few changes. However, to resolve the gaps, changes will still be required to all three areas: the tax data model, the engine API and the tax service module.

## 2 Design Specifications

### 2.1 Overview

The "tax engine" is a service module with an application program interface (API). Clients make calls to the tax engine by passing specific inputs to the engine. The tax engine then retrieves and computes applicable taxes based on the inputs and returns this list of taxes to the caller. The API defines the specifics of these inputs and outputs. The API definition is given below in the Inputs and Outputs sections.

The engine is a data driven service and relies on tax data maintained in a relational database to perform its functions (i.e., if no taxes are set up, no taxes can be calculated by the engine). The engine itself does not maintain or update the database. The data maintenance is handled through independent processes. For Enterprise this will be a combination of front end user screens and batch processes (e.g., 3<sup>rd</sup> party tax load). See the relevant documents for details of these processes.

The engine is designed to compute taxes for an individual charge and location. Given a ticket with three charges (e.g., time and distance, refueling, and LDW), three calls would be made to the tax engine to determine all taxes for the rental. These calls will typically be made by the charge engine when it determines the charges for a rental. The returned taxes get rolled up at the tax code level. In this example, three state level sales tax lines may get returned, one for each charge. These would be rolled up into a single state level sales tax line.

The tax engine is written in C and Pro\*C and makes up a Tuxedo service. The API includes a generic "C" function, 'FindTaxes' which handles the Tuxedo specifics. Thus developers writing clients need no knowledge of Tuxedo to use this service. To improve performance, database access is limited within the engine itself. Most data specific to a rental will get passed through the API. The engine will access the database to retrieve supporting tax data (e.g., rates), but here as well input/output is minimized by routinely caching this data in memory.

Caching of tax data is handled by a separate Tuxedo service. The service refreshes the cache periodically to pick up any data maintenance activity. In the current implementation of VRS this occurs once each day. The tax engine will always read from memory except when the cache refresh itself is running; during this time the engine will query directly from the database. Tax data tends to be static; however, it is important to note that changes made to tax data will not get picked up by the engine until the next cache refresh.

The tax engine currently supports tax on surcharges and tax on tax scenarios. The engine does *not* currently support varying taxes based on various criteria (e.g., vehicle cost.) To an extent VRS can support this by implementing such taxes as surcharges. The surcharge engine has support for flexibility in calculation rules and examples of this have been used in VRS to date.

### **Taxes Set Up as Surcharges**

As noted, it is sometimes useful to set up taxes as surcharges. This actually means populating surcharge tables with tax data (e.g. schg\_cds, calc\_rls, etc.) The surcharge engine then would pick up and process this data, not the tax engine. In these cases, the resultant charge will still be a *tax*; it just allows use of the surcharge engine's more flexible calculations to compute the taxes. A little extra care should be given in these cases to consider tax on tax or tax on surcharge implications. For example, if such a tax should apply to some other surcharge (i.e. a tax on surcharge scenario) then this tax would actually get set up as a *surcharge* on a surcharge. Similar consideration should be given for tax on tax situations and scenarios such as tax exceptions and bundling.

### **Requirements for Enterprise**

Enterprise has identified functionality their business needs which is not currently supported by the VRS code. These requirements have been documented as 'gaps' mentioned throughout this document. These gaps include the need for varying taxes by differing criteria including vehicle type and vehicle state of registration. Other gaps concern the data model. Enterprise needs the ability to define taxes at 'group' level in addition to the state, county, city and district levels currently supported by VRS. Some additional data needs to be stored in the tax tables to support relocation of branches and audit data as well. For full details of the gaps, refer to the individual gap sheets. Proposed design changes for each gap are addressed in the following section.

## 2.2 Detailed Design Description

In this section, each of the identified gaps which impact the tax engine are addressed. For each gap a description is given followed by a design solution. For complete details of each gap, however, refer to the individual gap sheets.

Note before meaningful calls can be made to the tax engine, tax data the engine relies on must be set up in the database. As mentioned in the section 2.1 above, for Enterprise this will be accomplished through a combination of front end user screens and a 3<sup>rd</sup> party tax data load process. In either case, the data needed and the general order in which it should be set up is:

- Tax and surcharge hierarchy
- Tax types
- Tax codes
- Taxes per charge types
- Tax exemptions
- Taxable surcharges

### 2.2.1 Gap 22: Taxes Based on Transaction Type

#### Gap Description:

This is no longer a gap for the tax engine. The gap will be handled through the use of the surcharge engine. Affected taxes will be implemented as surcharges. Refer to the surcharge engine design document for further details on the gap and solution.

#### Solution:

Please refer to the surcharge engine design document for solution description.

### 2.2.2 Gap 23: Sales Tax Based on Vehicle Type

#### Gap Description:

We need the ability to calculate sales tax based on the type of vehicle being rented.

#### Solution:

Although this is a tax requirement, we plan to accommodate this through the surcharge engine. Refer to the surcharge engine for the design details. No changes to the tax engine are currently anticipated for this gap.

### 2.2.3 Gap 25: Allow Group Level Maintenance of Taxes

#### Gap Description:

In VRS, taxes can be defined at the state, county, city and district levels. In Enterprise, however, tax decisions can also be made at the "group" level and they need the ability to define taxes at this level.

#### Solution:

Group will be added as another level in the tax and surcharge hierarchy. This amounts to a new area type and a new column on the BIL\_TAS\_AREAS table. This will allow defining and maintaining taxes at the group level as well as the other levels (state, county, city and district.) The tax engine will then be modified to query for taxes at the group level in addition to the existing levels.

#### *Pseudo code:*

Retrieve the *five* area ideas associated with the branch in question (group, state, county, city, district)

Retrieve all applicable tax codes in the five areas associated with the branch

### 2.2.4 Gap 27: Accommodate Detaching and Reattaching of Branches

#### Gap Description:

When branches physically change locations, the system needs to accommodate this move within the tax and surcharge hierarchy. In addition, the system must retrieve the appropriate taxes, based on input date, for where the branch was at that time.

#### Solution:

Effective start and end dates will be added to BIL\_TAS\_AREAS and STN\_CNTR to track, over history, where a branch resides within the hierarchy. The tax engine will be modified to use open ticket date in its query of BIL\_TAS\_AREAS to get the appropriate taxes for a given branch at that point in time. This assumes the processes, which maintain these tables, will populate these dates. A branch should never have overlapping dates for different rows on BIL\_TAS\_AREAS or STN\_CNTR, but in such an event, the row with the most current data (closest effective start date prior to the open ticket date) will be used.

*Pseudo code:*

Retrieve the five area ids (group, state, county, city, district) from BIL\_TAS\_AREAS for the given branch where open ticket date is between the effective date and end date

IF multiple rows returned, use the row with the latest effective start date prior to open ticket date

Retrieve all applicable tax codes for the five area ids retrieved

## 2.2.5 Gap 29: Store Audit Data on Tax Tables

### Gap Description:

Enterprise has standard audit columns they use on all tables to track change history. We need to add these columns to several of the tables being ported from the VRS data model to the Enterprise data model.

### Solution:

Four columns will be added to each of the tax and surcharge tables:

1. Create date & timestamp
2. Create user id
3. Change date & timestamp
4. Change user id

Any process, which updates these tables, needs to update these columns. This does not impact the tax engine directly as it currently does not update any tables.

## 2.2.6 Gap 30: Print Tax Exempt Charges on Invoices

### Gap Description:

The current VRS code suppresses printing tax exempt charges on invoices. For the Enterprise implementation exempted taxes should print showing the tax rate, but with a zero amount.

### Solution:

Currently the tax engine sets the 'activity flag' for exempt taxes to 'NN' meaning "non active, no show". In VRS this has the effect of suppressing display on screens or printing on documents for exempted taxes. The code will be changed to set this flag to 'AS' ("active show") and to set the tax amount to zero. Note the actual suppression or display of the charge lines is not controlled by the tax

engine. Other programs handle printing of documents and may need to change to support this requirement.

## 2.2.7 Gap 141: Accommodate Taxes Based on Vehicle State of Registration

### Gap Description:

This gap is specific to North Carolina. As NC vehicles are purchased the Motor Vehicle Highway Tax is prepaid. When these vehicles are rented in NC, a surcharge is used to recoup this money back to Enterprise. However, non NC vehicles are also rented in NC (notably South Carolina vehicles.) These vehicles have not had the NC MVHT prepaid, but the tax is still applicable. For these rentals, the tax must be charged and remitted to the government. So both the tax and the surcharge must be set up, but only one should ever be applied depending on if the vehicle was purchased in NC or not.

### Solution:

Although this gap involves a tax, we will accommodate it solely through use of the surcharge engine. In brief, both the tax and the surcharge will be set up as *surcharge* codes and the surcharge engine will determine which to assess based on the vehicle owning state. This solution involves no impact to the tax engine. Refer to the surcharge engine detail design document for full details.

## 2.3 Database Table Impacts

The following changes are required to the tax and surcharges tables:

- Define a new area type for group and add group id to BIL\_TAS\_AREAS (gap 25)
- Add effective and end date columns to BIL\_TAS\_AREAS and STN\_CNTR (gap 27)
- Add the following audit columns to all tax and surcharge tables, except those with existing audit field information.(gap 29)
  1. Create date & timestamp
  2. Create user id
  3. Create module
  4. Update date & timestamp
  5. Update user id
  6. Update module
  7. Record status

Definitions for the affected tables are given below with the highlighted portions indicating additions or changes to the VRS versions of these tables. Note some of this information is duplicated in the surcharge engine design document.

### 2.3.1.1 BIL\_TAS\_AREAS Table

This table stores the tax and surcharge hierarchy for each branch.

#### Columns:

STN_STN_ID	NOT NULL	VARCHAR2(10)
CRY_ARIMP_CRY_CD	NOT NULL	VARCHAR2(2)
STPR_ID	NOT NULL	VARCHAR2(10)
GRP_ID	NOT NULL	VARCHAR2(10)
COUN_ID	NOT NULL	VARCHAR2(10)
CITY_ID	NOT NULL	VARCHAR2(10)
DIST_ID	NOT NULL	VARCHAR2(10)
SCNTR_STN_CNTR_ID	NOT NULL	VARCHAR2(1)
BIL_TAS_AREAS_EFF_DTE	NOT NULL	DATE
BIL_TAS_AREAS_XPR_DTE	NULL	DATE
RECORD_STATUS	NULL	VARCHAR2(2)
CREATE_BY	NOT NULL	VARCHAR2(30)
CREATE_TIMESTAMP	NULL	DATE
CREATE_MODULE	NULL	VARCHAR2(1024)
UPDATE_TIMESTAMP	NULL	DATE
UPDATE_BY	NULL	VARCHAR2(30)
UPDATE_MODULE	NULL	VARCHAR2(1024)

#### Primary Key:

STN\_STN\_ID, SCNTR\_STN\_CNTR\_ID, BIL\_TAS\_AREAS\_EFF\_DTE



### 2.3.1.2 STN\_CNTR Table

This table associates a given station to the user defined area to which it belongs.

#### Columns:

STN_STN_ID	NOT NULL	VARCHAR2(10)
STN_CNTR_ID	NOT NULL	VARCHAR2(1)
STN_CNTR_NM	NOT NULL	VARCHAR2(30)
UDA_AREA_ID	NULL	VARCHAR2(10)
UDA_ATY_AREA_TYP	NULL	VARCHAR2(10)
STN_CNTR_EFF_DTE	NOT NULL	DATE
STN_CNTR_XPR_DTE	NULL	DATE
RECORD_STATUS	NULL	VARCHAR2(2)
CREATE_BY	NOT NULL	VARCHAR2(30)
CREATE_TIMESTAMP	NULL	DATE
CREATE_MODULE	NULL	VARCHAR2(1024)
UPDATE_TIMESTAMP	NULL	DATE
UPDATE_BY	NULL	VARCHAR2(30)
UPDATE_MODULE	NULL	VARCHAR2(1024)

#### Primary Key:

STN\_STN\_ID, STN\_CNTR\_ID, STN\_CNTR\_EFF\_DTE

### 2.3.1.3 TX\_CDS table

This table holds the taxes for different areas that are defined in the Taxes and Surcharge Hierarchy.

#### Columns:

TX_CD	NOT NULL	VARCHAR2(15)
STRT_DT	NOT NULL	DATE
CREAT_BY	NOT NULL	VARCHAR2(30)
CREAT_DT	NOT NULL	DATE
CRY_ARIMP_CRY_CD	NOT NULL	VARCHAR2(2)
EXMTP_IND	NOT NULL	VARCHAR2(1)
TX_NM	NOT NULL	VARCHAR2(35)
TX_RT	NOT NULL	NUMBER(6, 3)
UDA_AREA_ID	NOT NULL	VARCHAR2(10)
UDA_ATY_AREA_TYP	NOT NULL	VARCHAR2(10)
CR_CHG_DESC	NULL	VARCHAR2(35)
GLT_SEQ	NULL	NUMBER(6)
INACTV_DT	NULL	DATE
LST_UPDT_BY	NULL	VARCHAR2(30)
LST_UPDT_DT	NULL	DATE
MAX_TX_AMT	NULL	NUMBER(15, 3)
MAX_TX_PCT	NULL	NUMBER(6, 3)
RCT_CHG_TYP	NULL	VARCHAR2(5)
TXTYP_TX_TYP_CD	NOT NULL	VARCHAR2(4)
TAX_CDE_LOND_DESC	NULL	VARCHAR2(100)

### 2.3.1.4 TX\_CHG\_TYPS Table

This table stores tax codes associated with each charge type.

#### Columns:

RCT_CHG_TYP	NOT NULL	VARCHAR2(5)
TXC_TX_CD	NOT NULL	VARCHAR2(15)
TXC_STRT_DT	NOT NULL	DATE
SEQ_NBR	NOT NULL	NUMBER(1)
TXC_TX_LVL	NULL	NUMBER(3)
RECORD_STATUS	NULL	VARCHAR2(2)
CREATE_BY	NOT NULL	VARCHAR2(30)
CREATE_TIMESTAMP	NULL	DATE
CREATE_MODULE	NULL	VARCHAR2(1024)
UPDATE_TIMESTAMP	NULL	DATE
UPDATE_BY	NULL	VARCHAR2(30)
UPDATE_MODULE	NULL	VARCHAR2(1024)

### 2.3.1.5 TX\_TYPS Table

This table is used to store tax types. A tax type is used to classify taxes into categories. Multiple taxes can be grouped under one tax type.

#### Columns:

TX_TYP_CD	NOT NULL	VARCHAR2(4)
TX_TYP_DESC	NOT NULL	VARCHAR2(25)
EXMPTBL_FLG	NOT NULL	VARCHAR2(1)
RECORD_STATUS	NULL	VARCHAR2(2)
CREATE_BY	NOT NULL	VARCHAR2(30)
CREATE_TIMESTAMP	NULL	DATE
CREATE_MODULE	NULL	VARCHAR2(1024)
UPDATE_TIMESTAMP	NULL	DATE
UPDATE_BY	NULL	VARCHAR2(30)
UPDATE_MODULE	NULL	VARCHAR2(1024)

### 2.3.1.6 TXBL\_SCHGS Table

This table holds taxable surcharges.

#### Columns:

SCHG_SCHG_ID	NOT NULL	VARCHAR2(15)
SCHG_EFF_DT	NOT NULL	DATE
TCD_STRT_DT	NOT NULL	DATE
TCD_TX_CD	NOT NULL	VARCHAR2(15)
RECORD_STATUS	NULL	VARCHAR2(2)
CREATE_BY	NOT NULL	VARCHAR2(30)
CREATE_TIMESTAMP	NULL	DATE
CREATE_MODULE	NULL	VARCHAR2(1024)
UPDATE_TIMESTAMP	NULL	DATE
UPDATE_BY	NULL	VARCHAR2(30)
UPDATE_MODULE	NULL	VARCHAR2(1024)

### 2.3.1.7 AREA\_RLTNS

This table holds the parent/child relationships between area ids.

Columns:

UDA_ATY_AREA_TYP_PRNT	NOT NULL	VARCHAR2(10)
UDA_ATY_AREA_TYP_CHLD	NOT NULL	VARCHAR2(10)
UDA_AREA_ID_PRNT	NOT NULL	VARCHAR2(10)
UDA_AREA_ID_CHLD	NOT NULL	VARCHAR2(10)
RECORD_STATUS	NULL	VARCHAR2(2)
CREATE_BY	NOT NULL	VARCHAR2(30)
CREATE_TIMESTAMP	NULL	DATE
CREATE_MODULE	NULL	VARCHAR2(1024)
UPDATE_TIMESTAMP	NULL	DATE
UPDATE_BY	NULL	VARCHAR2(30)
UPDATE_MODULE	NULL	VARCHAR2(1024)

### 2.3.1.8 AREA\_TYPS

This table holds the valid area types for area ids with descriptions of each.

Columns:

AREA_TYP	NOT NULL	VARCHAR2(10)
AREA_TYP_ACT	NOT NULL	VARCHAR2(3)
AREA_TYP_DESC	NULL	VARCHAR2(35)
AREA_TYP_SHRT_DESC	NULL	VARCHAR2(10)
HIERARCHY_LVL	NULL	NUMBER(2)
DATES_REQ_FLG	NULL	VARCHAR2(1)
RECORD_STATUS	NULL	VARCHAR2(2)
CREATE_BY	NOT NULL	VARCHAR2(30)
CREATE_TIMESTAMP	NULL	DATE
CREATE_MODULE	NULL	VARCHAR2(1024)
UPDATE_TIMESTAMP	NULL	DATE
UPDATE_BY	NULL	VARCHAR2(30)
UPDATE_MODULE	NULL	VARCHAR2(1024)

### 2.3.1.9 TAX\_EXEMPTIONS

This table indicates tax exemptions by contract.

Columns:

CON_ID	NOT NULL	NUMBER(8)
ST_STATE_CD	NOT NULL	VARCHAR2(6)
ISSUE_DT	NOT NULL	DATE
CERT_NBR	NOT NULL	VARCHAR2(16)
EXPIRATION_DT	NULL	DATE
LST_CHG_DT	NULL	DATE
LST_USR_ID	NULL	VARCHAR2(30)
MICROFISCHE_NBR	NULL	NUMBER(9)
CRY_ARIMP_CRY_CD	NOT NULL	VARCHAR2(2)
TXTP_TX_TYP_CD	NOT NULL	VARCHAR2(4)

## 2.4 Inputs

The table below details the inputs for clients calling the tax engine via the C function, FindTaxes. FindTaxes is not actually part of the tax engine per se. It is a “wrapper” function to insulate client callers from Tuxedo specifics. It is called just as any other C function.

<b>Tax Engine Input Parameters</b>						
<i>Input Parameter</i>	<i>Description</i>	<i>FML Field Name</i>	<i>Mandatory</i>	<i>Type</i>	<i>Size</i>	<i>Source of Data</i>
Standard Header	The content of this header will be used for debugging, user test support, performance monitoring, tuning and error logging	Refer to standard header document for layout and population rules	Yes			All Clients
Amt	Charge amt	FN ROP CHG AMT	Yes	double		Client App
Chg typ	Charge type	FN ROP CHG TYP	Yes	string	5	Client App
Co cry	Check out country code	FN ROP CO CTY	Yes	string	2	Client App
Co stn	Check out station code	FN ROP CO STN ID	Yes	double		Client App
Co state cd	Check out state code	FN ROP CO STATE CD	Yes	string	2	Client App
Co date	Check out date	FN ROP CO TMSP	Yes	string	12	Client App
Exempt flag	Tax exempt flag	FN ROP TAX XMPT FLG	Yes	char	1	Client App
Inclusive flag	Tax inclusive flag	FN ROP TAX INCL FLG	Yes	char	1	Client App
Schg id	Surcharge id	FN ROP SCHG ID	No	string	1	Client App
Con id	Contract id	FN ROP CON ID	No	long	4	Client App
Counter id	Counter id within a station	FN ROP CO COUNTER ID	Yes	char	1	Client App

## 2.5 Outputs

The following table details the outputs returned from the tax engine:

<b>Tax Engine Output Parameters</b>					
<i>Output Parameter</i>	<i>Description</i>	<i>FML Field Name</i>	<i>Type</i>	<i>Size</i>	<i>Source of Data</i>
Error code	Error code	RN ROP ERR STATUS	int	4	tax engine
Rec count	Number of taxes returned	FN ROP REC COUNT	int	4	tax engine
Tax basis	Base amount tax was applied to	RN_ROP_TAX_BASIS	double	8	tax engine
Tax rate	Tax rate	FN ROP TAX RATE	double	8	tax engine
Tax cd	Tax code	FN ROP TAX CD	string	15	tax engine
Tax strt tmstp	Tax start date	FN ROP TAX STRT TMSP	string	16	tax engine
Tax amt	Calculated tax amount	FN ROP TAX AMT	double	8	tax engine
Tax_max_amt	Maximum amount for this tax	FN_ROP_TAX_MAX_AMT	double	8	tax engine
Tax desc	Line item description	FN ROP TAX DESC	string	35	tax engine
Chg typ	Charge type	FN ROP CHG TYP	string	5	tax engine
GLT seq nbr	GLT sequence number	FN ROP GLT SEQ NBR	long	4	tax engine
Tax_xmpt_flg	Flag to indicate if tax was exempted or not	FN_ROP_TAX_XMPT_FLG	int	4	tax engine
Act flag	Activity flag	FN ROP ACT FLG	string	2	tax engine
Taxable ind	Taxable indicator	FN ROP TAX IND	char	1	tax engine
Tx typ cd	Tax type code	FN ROP TX TYP_CD	string	4	tax engine

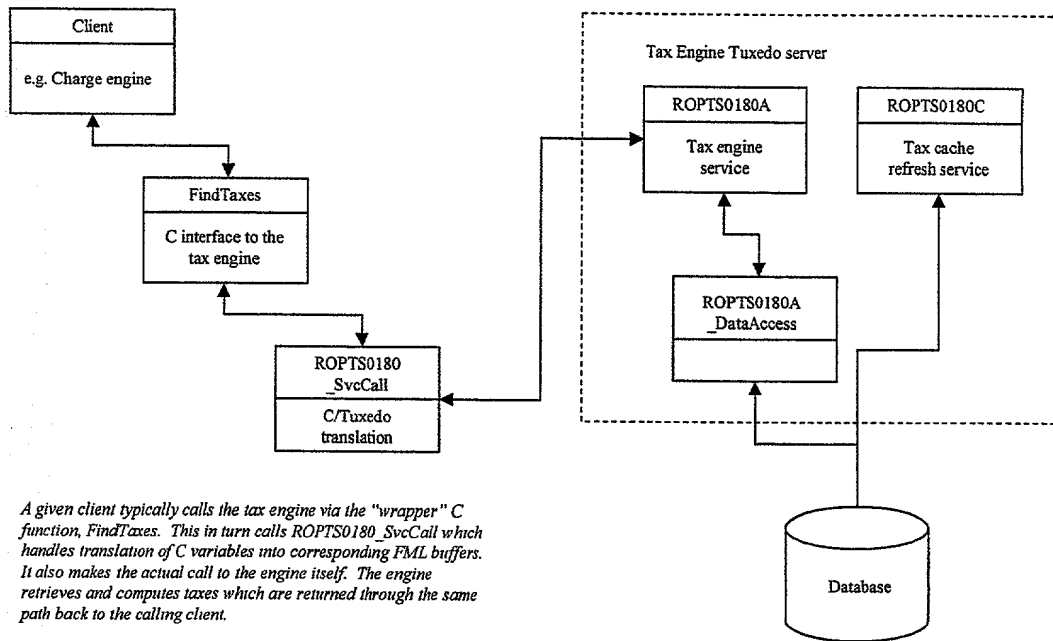
## Sample Input/Output from the Tax Engine

The following is an example of output produced by the tax engine for a given set of input values:

INPUTS	
Charge amount	50.000
Charge type	00001
Check out country	US
Check out station	MSPT01
Check out state code	MN
Check out date	200104200000
Tax exempt flag	N
Tax inclusive flag	
Surcharge id	
Contract id	0
Counter id	1

OUTPUTS	
Error code	0
Number of taxes	1
Tax basis	50.000
Tax rate	6.500
Tax code	US2MNHEN1
Tax start date	19980716
Tax amount	3.250
Maximum tax amount	99999.990
Tax description	STATE TAX
Charge type	00050
GLT sequence nbr	753
Tax exempted flag	0
Activity flag	AS
Taxable indicator	
Tax type code	STAX

## 2.6 Detailed Process Flow



A given client typically calls the tax engine via the "wrapper" C function, FindTaxes. This in turn calls ROPTS0180\_SvcCall which handles translation of C variables into corresponding FML buffers. It also makes the actual call to the engine itself. The engine retrieves and computes taxes which are returned through the same path back to the calling client.

The tax engine service is composed of two main modules. The heart of the service is in the DataAccess module. Note the service attempts to read all tax data from a memory cache in favor of the actual database. ROPTS0180C is a separate service which periodically refreshes the cache to pick up any tax data maintenance activity.

Each of the main pieces is discussed below:

**FindTaxes:**

This function will initiate a call to the tax service for a given station and charge type. The tax service will return all applicable taxes in a structure. FindTaxes reads these and groups taxes of like tax codes. This produces a set of taxes of unique tax codes which it moves an output structure to return to the calling client (this structure must be allocated by the client calling FindTaxes). FindTaxes itself is a pure C function and is called as such. All the Tuxedo specifics are managed by FindTaxes and the follow on routines it calls. This insulates client developers from the need for any Tuxedo knowledge. As far as clients are concerned, this function is the API to the tax engine. The inputs and outputs of this function are given in the inputs and outputs sections of this document.

**ROPTS0180A SvcCall:**

This function handles manipulation of 'C' variables into Tuxedo buffers and makes the actual Tuxedo call to the tax engine. Outputs from the engine are converted back to typical C variables and returned. Use of this function by FindTaxes frees clients from any need for Tuxedo knowledge or manipulation.

The specific functions it performs are a series of fairly straightforward Tuxedo steps as follows:

1. Allocate VIEW32 input buffer
2. Copy C input parms into VIEW32 buffer
3. Allocate FML32 input buffer
4. Convert the VIEW32 input buffer into the FML32 input buffer
5. Issue tpacall to the tax service with the FML32 input buffer
6. Allocate both a VIEW32 and FML32 output buffer
7. Issue tpgetrply for service response using the FML32 output buffer
8. Convert the FML32 output buffer to the VIEW32 output buffer
9. Copy the VIEW32 output data into the C output parameters and return

**ROPTS0180A:**

This is the actual entry point to the tax engine proper. It takes the FML32 buffer data it was passed and converts this back to VIEW32 format in order to pass the inputs to the database access module in more "C like" fashion. It then makes the call to the database access module using the VIEW32 buffers. Upon return, it converts the VIEW32 output buffer to an FML32 buffer and issues a tpreturn.

### ROPTF0180A DataAccess:

This is really the heart of the tax service. At a high level, it simply does two things, 1: gathers all the taxes applicable and 2: calculates the amounts for each of these taxes.

Getting the taxes has a couple of nuances. First, retrieving the taxes depends on whether surcharge id has been populated on the inputs. This indicates a tax on surcharge scenario and dictates somewhat different rules for getting taxes. The mechanics are also noteworthy. Tax data is typically cached in memory, so a routine checks this first. If the data is there, no database access is needed. Otherwise the data is retrieved from the database. In either case, once the taxes are retrieved, we move to the calculation step.

The calculate tax routine loops through all the taxes fetched and processes each individually. Tax exemption is checked first. If the tax is exempt, the associated activity flag is set to "non active, no show" (note, however, this will change with gap 30.) The output tax data is then simply filled mostly with the retrieved tax data. The dollar amount to which a given tax is applied is known as the *tax basis* and this must be determined. Each tax has an associated 'level' and 'sequence' which dictate rules for determining basis – mainly whether or not to include the charge amount itself in the basis and whether to include prior tax amounts in the basis for the particular tax being calculated. The actual tax amount then is computed as basis times rate.

## 2.7 Calling Process Variations

At this time, the charge engine is assumed to be the primary client of the tax engine. This does not in any way preclude the possibility of other clients. There are no calling process variations at this time as there is only one caller.



### 3 Key Risks, Assumptions, Issues, Dependencies

#### 3.1 Risks

No items at this time.

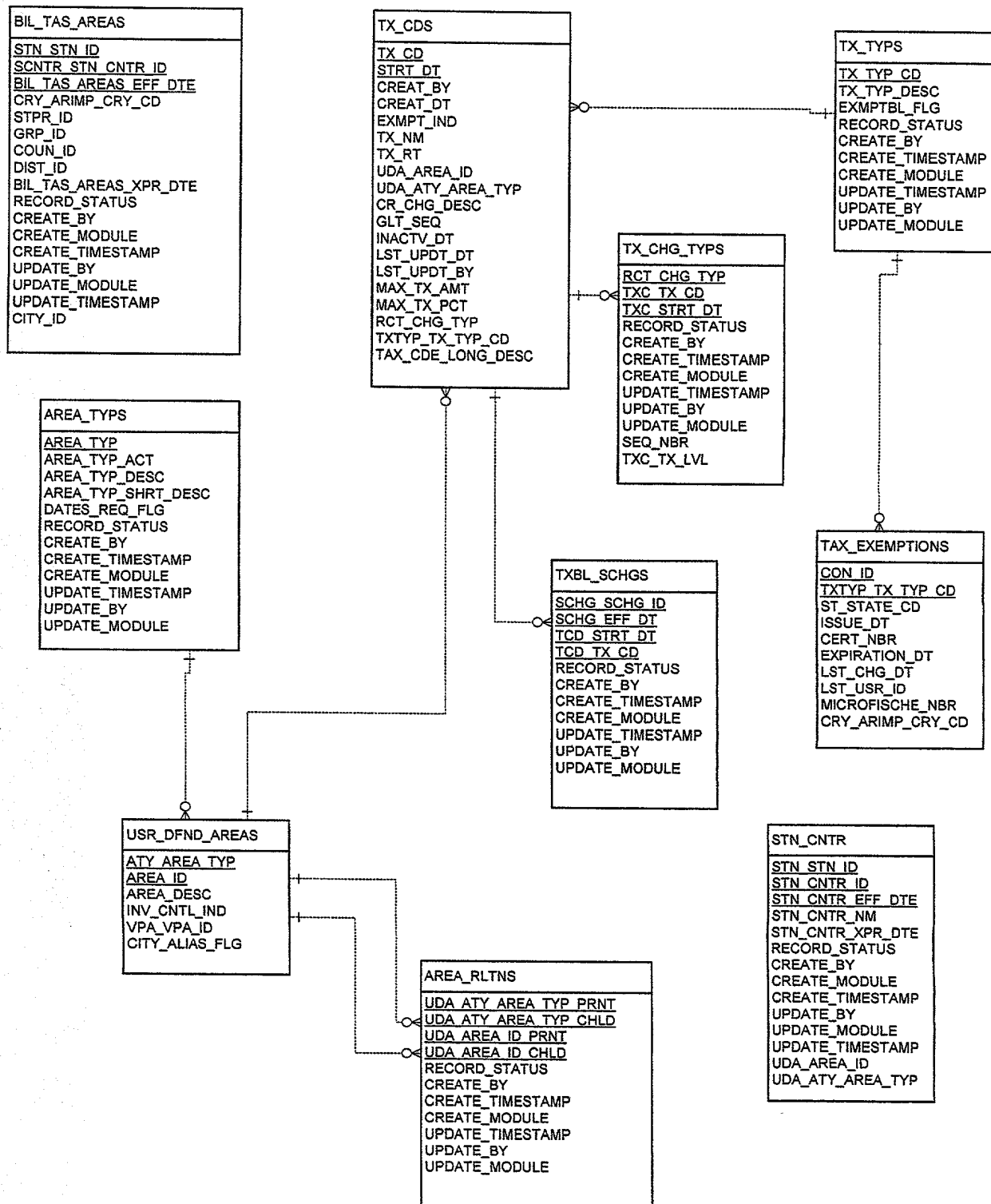
#### 3.2 Assumptions

No items at this time.

#### 3.3 Issues

- The proposed solution to Gap 30 states that tax rate and amount will be set to zero for exempted taxes. Is there any need to actually calculate the tax amount exempted? It was suggested this might be needed in Canada for accrual purposes.

## 4 Appendix



Application / Security

File Edit View Help

Use Cases

File Edit View Help

Name	Size	Type	Modified
Application Locking	92KB	Microsoft Word Document	12/20/01 4:06 PM
Application Locking-realized	89KB	Microsoft Word Document	12/20/01 4:13 PM
Change Password	84KB	Microsoft Word Document	12/20/01 4:03 PM
E-Location Fake Out	81KB	Microsoft Word Document	12/20/01 4:09 PM
Launch Application	85KB	Microsoft Word Document	12/20/01 4:07 PM
Menu Security	92KB	Microsoft Word Document	12/20/01 4:05 PM
Unlock Application	96KB	Microsoft Word Document	12/20/01 4:04 PM

7 object(s) 617KB

S01  
S02  
S03  
S04  
S05  
S06  
S07

## Version 1.5

	Version: <1.0>
Rental Redesign/ECARS 2	Date: <dd/mmm/yy>
<document identifier>	

## Revision History

Date	Version	Description	Author
06/12/2001	1.0	1 <sup>st</sup> Draft	Allison Bruhn
06/20/2001	1.1	1 <sup>st</sup> Revision	Allison Bruhn
06/22/2001	1.2	2 <sup>nd</sup> Revision	Allison Bruhn
07/02/2001	1.3	3 <sup>rd</sup> Revision-removed no saving before locking since the system will force a save when the lock icon is clicked; removed the flow stating a user has to enter their user id and password to initiate a lock (this is only done when unlocking the app); removed no locking rights from the alternative flow	Allison Bruhn
07/18/2001	1.4	4 <sup>th</sup> Revision-put in additional main flow Passing Newly Entered User Information; added alternate flow Different User Unlocking; added flow to incorporate locking when opening a ticket; added flow to address a unit pended ticket	Allison Bruhn
07/26/2001	1.5	5 <sup>th</sup> revision-put in flow to address that locking while on the rates/rules sub-app will not force a save; import into Req Pro	Allison Bruhn
08/01/2001	1.6	6 <sup>th</sup> Revision-changed the flow regarding automatic locking after 30 minutes to 5 minutes; also added flow to include a force save to callbacks; added flow for pre-write; added flow for differentiating between printing a pre-write ticket and just saving it (currently users can only print a pre-write); broke up the flow different user unlocking to describe what happens when a different user with the same security rights unlocks it versus a different user with different security rights unlocking it	Allison Bruhn

	Version: <1.0>
Rental Redesign/ECARS 2	Date: <dd/mmm/yy>
<document identifier>	

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# Business Use-Case Specification: Application Locking

## 1. Application Locking

### 1.1 Brief Description

The purpose of this use case is to show what the user does to lock and unlock the ECARS 2.0 application. The application may be opened by the user that initially locked it or by another user via a log in screen. This locking mechanism will extend to all areas of the application. *Note: With regards to the locking of a unit-pend or pre-write, these are still an open issue depending on how Open Ticket decides to handle.*

## 2. Flow of Events

### 2.1 Basic Workflow

#### 2.1.1 Use Case Begins

This use case begins when a user chooses to lock the ECARS 2.0 application. This functionality should be available during any type of transaction within the application (i.e. reservation, open ticket, callbacks, rates test window, etc.). If there is no activity on a terminal for five minutes see alternate flow Locking After Five Minutes.

#### 2.1.2 Lock Icon

The user initiates the locking process (i.e., clicking an icon and via a hot key). The system will force a save to the information within a reservation, open ticket, close ticket, and callback prior to the application being locked.

#### 2.1.3 Locked Screen

This locked screen will replace the current screen in the application. If the user is in the process of opening a ticket and chooses to lock it, see alternate flow Locking of Open Ticket. If the user is in the process of unit-pending a ticket and chooses to lock it, see alternate flow Unit-Pending a Ticket. If the user is in the process of pre-writing a ticket and chooses to lock it, see alternate flow Pre-Writing a Ticket.

#### 2.1.4 Locked By Display

Upon locking the application, some type of message should be displayed indicating that the application is locked by a particular user (TBD of what exactly should show).

#### 2.1.5 Unlocking of Application

At any point in time if a user chooses to work on the terminal in which the screen or screens have been locked, they must go through an unlocking process. The system prompts the user to enter their user id and password, which are required to unlock the application.

#### 2.1.6 Validation of Entered Information

If the same user who locked the app unlocks it, access to the application is immediately gained. The system will return to the current screen in the application after unlocking. If a different user is unlocking the application see alternate flow New User Unlocking. If the user id and password entered is not valid see alternate flow Invalid User Id and Password. If either the user id or password field is left blank see alternate flow Not Enough Information.

#### 2.1.7 The Use Case Ends

The user has successfully locked and unlocked the ECARS 2.0 application.

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## 2.2 Alternative Workflows

### 2.2.1 *Invalid User Id and Password*

The system does not recognize the user id and password entered and an error message is produced. The user can choose to re-enter the information required to unlock the application and the use case continues at the main flow Unlocking Of Application. If the information entered is invalid the use case ends. The user can also choose to cancel at any time.

### 2.2.2 *Not Enough Information*

The user has left a field blank (either user id, password or both) when attempting to unlock the application and an error message is produced. The user can choose to re-enter the information required to unlock the application and the use case continues at the main flow Unlocking of Application. If the information entered is invalid the use case ends. The user can also choose to cancel at any time.

### 2.2.3 *Locking After Five Minutes*

If the terminal is idle for five minutes with no mouse or keyboard action whatsoever, the idle screen should be locked automatically. A forced save will occur. Once a user decides to act on the locked screen, the use case continues at the main flow Unlocking of Application.

### 2.2.4 *Locking of Ticket*

*This is still an open issue. We will have to wait until open tickets decides how to implement.* If during the opening of a ticket the user chooses to lock the application, the ticket reacts as if it is a pre-write. Last name is the only item required to lock the application during the opening of a ticket. Once the user unlocks the application they can complete the ticket.

### 2.2.5 *Unit-Pending a Ticket*

*This is still an open issue. We will have to wait until open tickets decides how to implement.* The user chooses to lock a ticket that they have unit-pended. Once they unlock it, the ticket will remain in a unit-pended state until the user assigns a unit to that ticket.

### 2.2.6 *Pre-Writing a Ticket*

*This is still an open issue. We will have to wait until open tickets decides how to implement.* The user chooses to lock a ticket that is a pre-write status.

#### 2.2.6.1 *Pre-Write With Save and No Print*

The user chooses to save the pre-write and continues working with the application (TBD).

#### 2.2.6.2 *Pre-Write With Save and Print*

The user chooses to save the pre-write and print it out (in current state all a user can do it print) and continues working with the application (TBD).

### 2.2.7 *New User Unlocking with Same Security Rights*

The system takes the information entered by the new user wanting to unlock the application and passes it to the Application Security System for authentication. The application security system confirms the user id and password are valid and that the user has the same security rights as the previous user. The system will return to the current screen in the application after unlocking. If the user id and password entered is not valid see alternate flow Invalid User Id and Password. If either the user id and password field is left blank see alternate flow Not Enough Information.

### 2.2.8 *New User Unlocking with Different Security Rights*

The system takes the information entered by the new user wanting to unlock the application and passes it to the Application Security System for authentication. The application security system confirms the user id and password are valid but the new user has lesser security rights from the previous user.



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#### 2.2.8.1 System Closes Screens

The system closes any of the screens that were previously opened before the application locking occurred and the user with lesser security rights is returned to the splash screen . The new user can then work with the application, based on their security access, if they choose to do so.

#### 2.2.9 The use case ends.

### 3. Special Requirements

#### 3.1 The requirements for the application locking are:

- An idle screen should be locked automatically by the system after a system-determined idle period
- The user should be able to lock a screen from any screen whenever desired
- The locked screen will replace the current screen in the application
- The locked screen will require the user to log in to unlock the screen
- The system will return to the current screen in the application after unlocking
- The user unlocking the application will replace the user id of the user who locked the application for the purposes of security and authentication.
- When authentication takes place, the system should respond based on the new user's rights rather than the old

#### 3.2 System generated notes

- The user that is authenticated will be the employee number in the system generated note, the user generated notes, and the updated by field in the database.

### 4. Pre-Conditions

- It is assumed that the user has successfully launched the ECARS 2.0 application.

### 5. Post Conditions

#### 5.1 < Post-condition One>

### 6. Extension Points

#### 6.1 <name of extension point>

### 7. Open Issues

- What hot key should be used to lock
- If any sub-application is going to be locked (other than reservation, open, close, and callbacks) such as rates, taxes/surcharges, etc. is there going to be a save as well or not?
- How is locking of pre-write going to work? (dependent on what open ticket is going to do)
- How is locking of a unit pend going to work (dependent on what open ticket is going to do)
- How is locking of an open ticket going to work? (dependent on what open ticket is going to do)

### 8. Future Scope



**Project:**  
Application Navigation and Security

**Phase:**  
Inception

**Iteration:**  
N/A

## Application Locking - Realized

Version <1.0>

**Artifact:**  
Use Case Specification

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**Project:**  
Application Navigation and Security

**Phase:**  
Inception

**Iteration:**  
N/A

## Revision History

Date	Version	Description	Author
8/9/01	1.0	Created	m. beard

**Artifact:**  
Use Case Specification

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## Application Navigation and Security

### 1. Application Locking-Realized

#### 1.1 Brief Description

This document captures the system requirements for the Application Locking UC.

### 2. Flow of Events

#### 2.1 Basic Flow

2.1.1 User selects the Lock application function.

2.1.2 System determines which sub-applications are active.

Loop through steps 3 – 4 until all active records have been processed or until an exception is thrown.

2.1.3 System invokes the complete function with-in the sub-application.

System is to attempt to save the active information. After successfully saving the information the database lock for that record must be released.

2.1.4 System places item in the session History.

2.1.5 System sets the application status to "Locked".

2.1.6 System displays Lock/Unlock Screen.

2.1.7 Use Case Ends

#### 2.2 Alternative Flows

##### 2.2.1 Idle time exceeded

2.2.1.1 Idle indicator has determined that the idle time has been exceeded.

2.2.1.2 Idle indicator triggers the Lock application function

2.2.1.3 System determines which sub-applications are active.

Loop through steps 5-6 for each active record.

2.2.1.4 System invokes the complete function with the sub-application.

System is to attempt to save the active information. After successfully saving the information the database lock for that record must be released.

If the system encounters an error, then the changes for that record will not be saved. System displays an error and does not process the rest of the open records. End use case.

**Project:**  
Application Navigation and Security

**Phase:**  
Inception

**Iteration:**  
N/A

- 2.2.1.5 System places item in the session History.
- 2.2.1.6 System sets the application status to "Locked".
- 2.2.1.7 System displays Lock/Unlock Screen.
- 2.2.1.8 Use Case Ends.

### 3. Special Requirements

- 3.1 Upon Locking the Database lock associated with the record shall be removed.

### 4. Pre-Conditions

- 4.1 For successful locking without data loss, the active record must meet the minimum requirements as specified by the sub-applications "Save" function.

### 5. Post-Conditions

- 5.1 Application is in the "Locked" state with the Application Locked Screen active.
- 5.2 Application returned control to one of the sub-applications.

### 6. Extension Points

- 6.1 Sub-App is unable to save the active record.
  - 6.1.1 Sub-application throws exception.
  - 6.1.2 System displays exception.
  - 6.1.3 User clears exception.
  - 6.1.4 System display appropriate sub-application.
  - 6.1.5 Use case ends.

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**Enterprise Rent-A-Car**

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**Rental Redesign/ECARS 2.0**  
**Business Use-Case Specification: Change Password**

**Version 1.2**

	Version: <1.0>
Rental Redesign/ECARS 2	Date: <dd/mm/yy>
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## Revision History

Date	Version	Description	Author
06/25/2001	1.0	1 <sup>st</sup> Draft	Allison Bruhn
07/05/2001	1.1	1 <sup>st</sup> Revision-added alternate flow user chooses to change password and invalid information entered; changed brief description;	Allison Bruhn
07/09/2001	1.2	Combined the first two steps of the main flow; added can be called by Menu Security use case in the description; added user id to the required information main flow; added to alternate flow Invalid Information entered-password entered not within the length parameters, user gets locked out after so many unsuccessful attempts, and invalid input due to a user leaving one or more of the required fields blank; added to special requirements that password must be 6-30 characters in length.	Allison Bruhn



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# Business Use-Case Specification: Change Password

## 1. Change Password

### 1.1 Brief Description

The purpose of this use case will describe what a user does to change their password. A user may be prompted by the system to change their password if it has expired, when it is set to its default value (i.e. when a new user logs in for the very first time), or a user may choose to change it on their own.

## 2. Flow of Events

### 2.1 Basic Workflow

#### 2.1.1 Use Case Begins

This use case begins when a user is either prompted by the system (due to an expired password or a user logging in for the very first time) or chooses to change their password on their own. At the time a user is initially logging in, the system prompts them to change their password as it has expired. If the user chooses to change their password, with no prompt by the system, see alternate flow User Chooses to Change Password.

#### 2.1.2 System Displays Entry Field

The system displays fields where a user is required to enter information necessary to change their password.

#### 2.1.3 User Enters Required Information

The user enters the required information that includes their user id, existing password, their new password, and confirmation of their new password.

#### 2.1.4 System Sends Information For Processing

The system sends this newly entered information to the Application Security System for processing.

#### 2.1.5 System Validates Information

The application security system confirms the information entered is valid. If the user changed their password on their own some message is displayed to the user confirming the password change was successful. If the user changed their password due to it expiring, no message will be shown to the user that the change was successful. The user can continue working with the ECARS 2.0 application.

#### 2.1.6 No Validation By System

The system does not validate the information entered by the user. If the existing password entered is not valid, see alternate flow Invalid Password Entered. If the newly entered password entered matches a recent password, if the confirmation password entered is not valid, if the information entered does not fall within the required length parameters, or one of the required fields is left blank see alternate flow Invalid Information Entered.

#### 2.1.7 The Use Case Ends

The use case ends as the user has successfully changed their password and can continue working with the application.

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## 2.2 Alternative Workflows

### 2.2.1 *User Chooses to Change Password*

The user, for whatever reason, chooses to change their existing password with no system prompt (i.e. by clicking an icon, etc.). The use case continues at the main flow System Displays Entry Fields. The user may also choose to cancel at any time.

### 2.2.2 *Invalid Password Entered*

The system does not recognize the existing password that is entered. The user can choose to re-enter the information and the use case continues as the main flow System Sends Information for Processing. If the user does not choose to re-enter the information, the use case ends. If the user exceeds the number of sign-on attempts allowed the use case ends.

### 2.2.3 *Invalid Information Entered*

The newly entered password is the same as the existing password

The confirmation of the newly entered password is incorrect

The newly entered password and/or confirmation does not fall within the length requirements (no less than six and no more than thirty)

One or more of the required fields is left blank

The user will receive some sort of error message should any of the above scenarios apply. The user can choose to re-enter the information and use case continues at the main flow System Sends Information for Processing. If the user does not choose to re-enter the information, the use case ends. The user can also choose to cancel at any time.

### 2.2.4 *The use case ends*

## 3. **Special Requirements**

### 3.1 **Password Length**

The password entered must be at least six characters in length but no more than thirty

## 4. **Pre-Conditions**

## 5. **Post Conditions**

### 5.1 <Post-condition One>

## 6. **Extension Points**

### 6.1 <name of extension point>

## 7. **Questions**

## 8. **Future Scope**

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**Enterprise Rent-A-Car**

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**Rental Redesign/ECARS 2.0**  
**Business Use-Case Specification: E-Location Fake**  
**Out**

**Version 1.4**

	Version: <1.0>
Rental Redesign/ECARS 2	Date: <dd/mmm/yy>
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## Revision History

Date	Version	Description	Author
07/31/2001	1.0	1 <sup>st</sup> Draft-Initial creation	Allison Bruhn
08/02/2001	1.1	1 <sup>st</sup> Revision-added flows for user entering information to gain security access to emulate; different levels of security depending on level of employee (i.e. what group branches can actually be emulated); added alternate flows;	Allison Bruhn
08/06/2001	1.2	2 <sup>nd</sup> Revision-changed flows back to take into account security issues—i.e. with admin express; added a special requirements section	Allison Bruhn
08/14/2001	1.3	3 <sup>rd</sup> Revision-minor changes based on security 1.6 meeting with business	Allison Bruhn
08/27/2001	1.4	4 <sup>th</sup> Revision-minor changes based on meeting with business; added group and branch information is displayed under the flow User Credentials Displayed; added it is user id specific	Allison Bruhn
			#

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4.	Pre-Conditions	5
5.	Post Conditions	5
5.1	<Post-condition One>	5
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# Business Use-Case Specification: E-Location Fake Out

## 1. E-Location Fake Out

### 1.1 Brief Description

The purpose of this use case is to describe what a user goes through to emulate their own group branch while they are at a different Enterprise location. For example, this may be done if they have no access to their own terminals or power has been completely lost for some reason. For the purpose of a rental branch, this type of emulation may also occur to perform certain branch duties such as the End of Month Report or the completion of handwritten tickets.

## 2. Flow of Events

### 2.1 Basic Workflow

#### 2.1.1 Use Case Begins

This use case begins when a user decides to or is required to emulate their own branch from a different terminal location. The user must contact their assigned administrator in order to gain such access.

#### 2.1.2 Administrator Contacted

Once the administrator is notified, they will access the Admin Express application. The administrator then selects the 'Application User' function and the process begins that will eventually allow the particular user requesting emulation to gain access. If the user chooses to call the administrator once they are complete see alternate flow Remove Location/Un-Assign User (note: the user is not required to call back).

#### 2.1.3 Administrator Selects User

The administrator selects which User has requested access, the Edit User Security function and the Substitute Location function (the fake-out location)—noted in the Substitute Location Access Use Case (application security 1.6).

##### 2.1.3.1 User Credentials Displayed

The system will display the employee's name, user id, and group branch based on the User the Administrator has selected. The administrator then confirms this is the correct employee selection.

#### 2.1.4 Emulation Rights Granted

The user is granted access from the substitute location to emulate a different branch. This location must be within the same group as the branch requesting the emulation (see Special Requirements section).

#### 2.1.5 System displays one of the following conditions (based on substitute location access use case)

##### 2.1.5.1 Previous Day Emulation

If the user previously had a substitute location for a day other than current day, display that for informational purposes.

##### 2.1.5.2 User Never Has Had Substitute Capabilities

If the user has never had access to a substitute location, the system will indicate this.

##### 2.1.5.3 Previous Substitute Capabilities For Current Day

If the user has already had access to the substitute location earlier in the current day, the system will display that.

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#### 2.1.6 The Use Case Ends

The use case ends as a user successfully emulated one group branch from another group branch location.

### 2.2 Alternative Workflows

#### 2.2.1 Remove Location/Un-assign User

The user has completed the emulation. The Administrator selects the location the user requests to unassign. The administrator commits this removal process and the substitution fake-out is complete.

#### 2.2.2 The Use Case Ends

### 3. Special Requirements

- An E-location fake out can only occur from a branch within the group as the branch being emulated
- The administratively configured access is valid for ECARS 2.0 logons that occur within the business day requested only. If they need it past that point they will have to call their assigned administrator.

### 4. Pre-Conditions

### 5. Post Conditions

#### 5.1 < Post-condition One>

### 6. Extension Points

#### 6.1 <name of extension point>

### 7. Questions

### 8. Future Scope



## **Rental Redesign/ECARS 2.0** **Business Use-Case Specification: Launch** **Application/User Authentication**

[illegible]

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## Revision History

Date	Version	Description	Author
06/12/2001	1.0	1 <sup>st</sup> Draft	Allison Bruhn
06/22/2001	1.1	1 <sup>st</sup> Revision-added section for E-locale and specified what exactly E-locale will establish; added alternate flow Invalid Password; added section for future scope	Allison Bruhn
07/02/2001	1.2	2 <sup>nd</sup> Revision-added step in main flow reflecting the system determines language (separate from E-locale);	Allison Bruhn

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# Business Use-Case Specification: Launch Application/User Authentication

## 1. Launch Application/User Authentication

### 1.1 Brief Description

The purpose of this use case is to describe the interaction that occurs between the user and the system which allows the user to gain security access to the ECARS 2.0 application. The ECARS 2.0 application will use the Application Security System to determine whether or not a user has sufficient rights for such access. Once security access is gained refer to the use case Menu Security.

## 2. Flow of Events

### 2.1 Basic Workflow

#### 2.1.1 Use Case Begins

This use case begins when a user chooses to work with the ECARS 2.0 application.

#### 2.1.2 Enter User Credentials

The system prompts the user to enter a user id and password in order to gain security access to the ECARS 2.0 application. The user enters the required information .

#### 2.1.3 Passing User Information

The system takes the information entered by the user and passes it to the Application Security System for authentication. If not enough information was entered see alternate flow Insufficient Information.

#### 2.1.4 Receive Authentication Status

The application security system confirms the user id and password are valid. The user is given access to the ECARS 2.0 application . If a valid user id was entered but a valid password was not see alternate flow Invalid Password. If the system denies the user access to the application, see alternate flow No Rights To Application. If it is time for the user to change their password, call use case Change Password. The user can also choose to cancel at any time and the use case ends. If the user selects to cancel, the system will go back to the initial splash screen.

#### 2.1.5 Language Determined

Upon initial entry to the ECARS 2.0 application (i.e. the user clicks an icon and is brought to an initial sign on screen) the system determines what language the application will display (this will be determined from the browser-however, for Iteration I, language is out of scope) .

#### 2.1.6 E-locale

Prior to the user going through the security process, the system establishes E-locale. This is determined when the terminal is activated. The following information is obtained during this process:

- Time zone of user
- Locale
- Home machine of user
- Legacy group
- Legacy branch
- Peoplesoft group
- Peoplesoft branch
- Country code

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### 2.1.7 *The use case ends*

The user has successfully launched the ECARS 2.0 application and gained security rights to the application by entering a valid user id and password. See the Menu Security Use Case for more information regarding a user's security rights once in the ECARS 2.0 application.

## 2.2 **Alternative Workflows**

### 2.2.1 *No Rights to Application*

The system does not recognize the user id and password entered and some type of error message is produced. The user can choose to re-enter the information required to get into the application and the use case continues at the main flow Initiating Call. If the user does not choose to re-enter the information the use case ends.

### 2.2.2 *Invalid Password*

A valid user id was entered but an invalid password was entered and some type of error message is produced. The user enters a different password and the use case continues at the main flow Initiating Call. The user does not choose to enter a different password and the use case ends.

### 2.2.3 *Insufficient Information*

On or both of the fields (user id and password) required for the system to pass to the Application Security System were missing and some type of error message is produced. The user can choose to re-enter the information and the use case continues at the main flow Initiating Call. If the user does not choose to re-enter the information the use case ends.

### 2.2.4 *The use case ends*

## 3. **Special Requirements**

## 4. **Pre-Conditions**

4.1 The local computer has been logged into

4.2 ECARS2.0 Application and Secured Objects Registered with Application Security

This pre-condition assumes that the ECARS2.0 application and its subsequent "Secured" objects are registered in the Application Security System. See Supplemental Specification: ECARS20 Secured Objects

## 5. **Post Conditions**

5.1 Post-condition One

## 6. **Extension Points**

6.1 name of extension point

## 7. **Future Scope**

7.1 E-locale—this will have to be determined based on country and language

---

# Enterprise Rent-A-Car

---

## Rental Redesign/ECARS 2.0 Business Use-Case Specification: Menu Security

Version 1.6

	Version: <1.0>
Rental Redesign/ECARS 2	Date: <dd/mmm/yy>
<document identifier>	

## Revision History

Date	Version	Description	Author
06/15/2001	1.0	1 <sup>st</sup> Draft	Allison Bruhn
07/06/2001	1.1	1 <sup>st</sup> Revision	Allison Bruhn
07/09/2001	1.2	2 <sup>nd</sup> Revision	Allison Bruhn
07/11/2001	1.3	3 <sup>rd</sup> Revision-changes after meeting with business; added 'profile' to the main menu navigation area to contain change password; took out close, save, and print from 'file' and added exit; changed a majority of the flows in the use case to reflect this;	Allison Bruhn
07/18/2001	1.4	Changed flows—got rid of file and view. Added mouse over ability	Allison Bruhn
07/20/2001	1.5	Import to Req Pro	Allison Bruhn
07/27/2001	1.6	Added another level of security to the menu—car prep and driver (the purpose of this is to show read only access when a user has less rights than say a manager.	Allison Bruhn

	Version: <1.0>
Rental Redesign/ECARS 2	Date: <dd/mm/yy>
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	Version: <1.0>
Rental Redesign/ECARS 2	Date: <dd/mmm/yy>
<document identifier>	

## Business Use-Case Specification: Menu Security

### 1. Menu Security

#### 1.1 Brief Description

The purpose of this use case is to show what different security rights branch employees have upon access to the ECARS 2.0 menu. The three that will be looked at in this use case are 1) car prep and driver, 2) management trainee, management assistant, assistant manager and 3) a branch manager. This use case will also discuss navigation functionality that the user will be presented with. The navigation will involve mouse hover and shortcut key functionalities.

### 2. Flow of Events

#### 2.1 Basic Workflow

##### 2.1.1 Use Case Begins

This use case begins when a user chooses to work with the ECARS 2.0 application. The user will have already logged on to the initial user id and password screen.

##### 2.1.2 Rights Made Available

Right after the user enters their user id and password, the system makes the application rights status associated to the user available at this time. The user may have more or less access rights according to their security level.

##### 2.1.3 Branch Employee Security Rights

A branch employee (management trainee, management assistant, assistant manager) chooses to work with the ECARS 2.0 application. If the branch manager chooses to work with the application see alternate flow Branch Manager Security Rights. If a car prep or driver chooses to work with the application see alternate flow Other Rights.

##### 2.1.4 Main Menu Navigation Area

Upon gaining access to the ECARS 2.0 application the user will see a main menu..

##### 2.1.5 Tools, Profile and Help

The user will see the basic functions of tools, and help on the main menu navigation area. Based on the level of the employee what is actually seen within each function may vary. For a branch employee (management trainee, management assistant, and assistant manager), their type of security can be seen continuing with the flows below. Within these sub-applications, the user will be able to navigate using the Control ' ' keys (shortcuts).

##### 2.1.6 Tools

Within Tools the user will see Estimate Total Charges' and 'Reports' as well as "Change Password." Please refer to the Change Password Use Case for further information.

##### 2.1.7 Help

Within Help the user will see 'Web ECARS Help' and 'About.'

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### 2.1.8 Reservation, Contracts, Callbacks, and Rates

The user will see the sub-applications of reservation, callbacks, contracts, and rates on the main menu navigation area. Within these sub-applications, the user will be able to navigate using the Control + key keys (shortcuts).

### 2.1.9 Mouse-Hover

The user is able to use the mouse to "hover" over each sub-application and view the different options under each. The user can select whichever sub-application they wish to work in by clicking one of the options associated to that sub-application.

### 2.1.10 Reservation

The user chooses to work with the reservation sub-application. If the user chooses to work within the callback sub-application see alternate flow Callback. If the user chooses to work within the ticket sub-application see alternate flow Ticket. If the user chooses to work within the Rates sub-application see alternate flow Rates.

### 2.1.11 The Use Case Ends

## 2.2 Alternative Workflows

### 2.2.1 Branch Manager Security Rights

The branch manager will have the same rights as those listed in the main flows for the branch employee. In addition, the branch manager will also be able to access the rates test window as well as the taxes and surcharges functionality and these fall under the Rates sub-application.

### 2.2.2 Rates Sub-Application

#### 2.2.2.1 Rates Test Window

A branch manager should be able to access the rates test window from their security menu. See Rate Verification Use Case.

#### 2.2.2.2 Taxes and Surcharges

A branch manager should be able to access the taxes and surcharges window from their security menu.

### 2.2.3 Contracts

Once the user selects to work in the contracts sub-application, they can select to search for an open ticket or create a new ticket. The options of open, edit, and close will be available.

#### 2.2.3.1 Open, Edit, and Close

Once the user has selected a ticket, the functions of 'open,' 'edit,' and 'close' become enabled. They can also choose to select another sub-application to work with and the use case continues at the Main Menu Navigation Area.

### 2.2.4 Callbacks

Once the user selects to work in the callbacks sub-application, they will see Callback Summary and Callback Search functionalities. They can also choose to select another sub-application to work with and the use case continues at the Main Menu Navigation Area.

### 2.2.5 Other Rights

A car prep and/or driver choose to work with the ECARS 2.0 application. They enter their user name and password and are brought to their menu.

#### 2.2.5.1 Menu of Car Prep/Driver

The user will have read only rights to reservations. They will be able to change their password if they so desire .

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2.2.6 *The use case ends*

### 3. **Special Requirements**

### 4. **Pre-Conditions**

### 5. **Post Conditions**

5.1 <Post-condition One>

### 6. **Extension Points**

6.1 <name of extension point>

### 7. **Questions**

### 8. **Menu Hot Keys and Shortcuts (a supplementary guide)**

Please see the link [Approved Hot Key Documentation](#)

### 9. **Future Scope**



**Project:**  
Application Navigation and Security

**Phase:**  
Inception

**Iteration:**  
N/A

## Unlock Application - Realization

Version <1.0>

**Artifact:**  
Use Case Specification

**Page:**  
Page 1 of 5

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**Project:**  
Application Navigation and Security

**Phase:**  
Inception

**Iteration:**  
N/A

## Revision History

Date	Version	Description	Author
8/9/01	1.0	Created	M. Beard

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6.3	User does not have rights to the records in the History file.	5
6.3.1	System determines that the user does not have rights to the records in the History file.	5
6.3.2	System Displays Main Menu Splash Screen based upon the user's security rights.	5
6.3.3	Use Case Ends.	5

## Application Navigation and Security

### 1. Unlock Application

#### 1.1 Brief Description

This document captures the systems level "What" based upon the business requirements for Unlocking the Application.

### 2. Flow of Events

#### 2.1 Basic Flow

- 2.1.1 *User selects to Unlock the Application.*
- 2.1.2 *System displays the Lock /Unlock Screen.*
- 2.1.3 *User enter their credentials (User ID and Password).*
- 2.1.4 *The system calls the Authenticate User function (User ID, Password, Application)*
- 2.1.5 *The system retrieves the History data.*
- 2.1.6 *The system determines that the user has rights to the records in the History.*
- 2.1.7 *The system retrieves the records from the DB.*
- 2.1.8 *The system re-issues the DB lock.*
- 2.1.9 *The system sets the session status to Active.*
- 2.1.10 *The system displays the last record to the user.*
- 2.1.11 *The use case ends.*

#### 2.2 Alternative Flows

### 3. Special Requirements

### 4. Pre-Conditions

- 4.1 **Application was in the Locked state to start.**

## **5. Post-Conditions**

### **5.1 Application Active**

- 5.1.1 *Application Active and presents the last active record.*
- 5.1.2 *Application Active and placed at the Main Menu Splash Screen.*

### **5.2 Application Locked**

- 5.2.1 *User authentication threw an exception. Return to Lock Screen.*
- 5.2.2 *User presented the Mandated Change Password Screen. Successful – Main Menu Splash Screen.*

## **6. Extension Points**

### **6.1 Errors during Authenticate User**

- 6.1.1 *Exceptions will be handled by the Authenticate User Use Case.*
- 6.1.2 *Use Case Ends.*

### **6.2 User does not have rights to the records in the History file.**

- 6.2.1 *System determines that the user does not have rights to the records in the History file.*
- 6.2.2 *System Displays Main Menu Splash Screen based upon the user's security rights.*
- 6.2.3 *Use Case Ends.*

### **6.3 User has rights to some of the records in the History file. (Future)**

- 6.3.1 *System determines that the use has rights to at least one but not all the records in the History file.*
- 6.3.2 *System removes the non-valid files from the access list.*
- 6.3.3 *Use case continues with main flow at 2.1.7.*



# Application Navigation & Summary

Supplemental Specs			
File Edit View Help			
	Name	Size	Type
701	About ECARS 2.0 Screen Action Spec.	119KB	Microsoft Word Document
702	Hot Keys for APNS	132KB	Microsoft Word Document
703	Legal Notice	82KB	Microsoft Word Document
704	Lock-Unlock Screen Action Spec.	169KB	Microsoft Word Document
705	Login Screen Spec.	1,607KB	Microsoft Word Document
706	Main Menu Screen Action Spec.	566KB	Microsoft Word Document
707	Prevent Multiple Sessions on Same Weblo...	108KB	Microsoft Word Document
708	Secured Object Matrix	78KB	Microsoft Word Document
709	Secured Objects Listing ECARS 2.0	108KB	Microsoft Word Document
9 object(s)		2.89MB	

0 object(s) selected



Project:  
ECARS 2.0

Phase:  
Inception

Iteration:  
N/A

# ECARS 2.0 Screen Action Specification: About ECARS 2.0 Version 1.0

Version 1.0

Artifact:  
Screen Action Specification

Page:  
1 of 5  
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**Project:**  
ECARS 2.0

**Phase:**  
Inception

**Iteration:**  
N/A

## Revision History

Date	Version	Description	Author
11/12/01	1.0	Created Template	M. Beard

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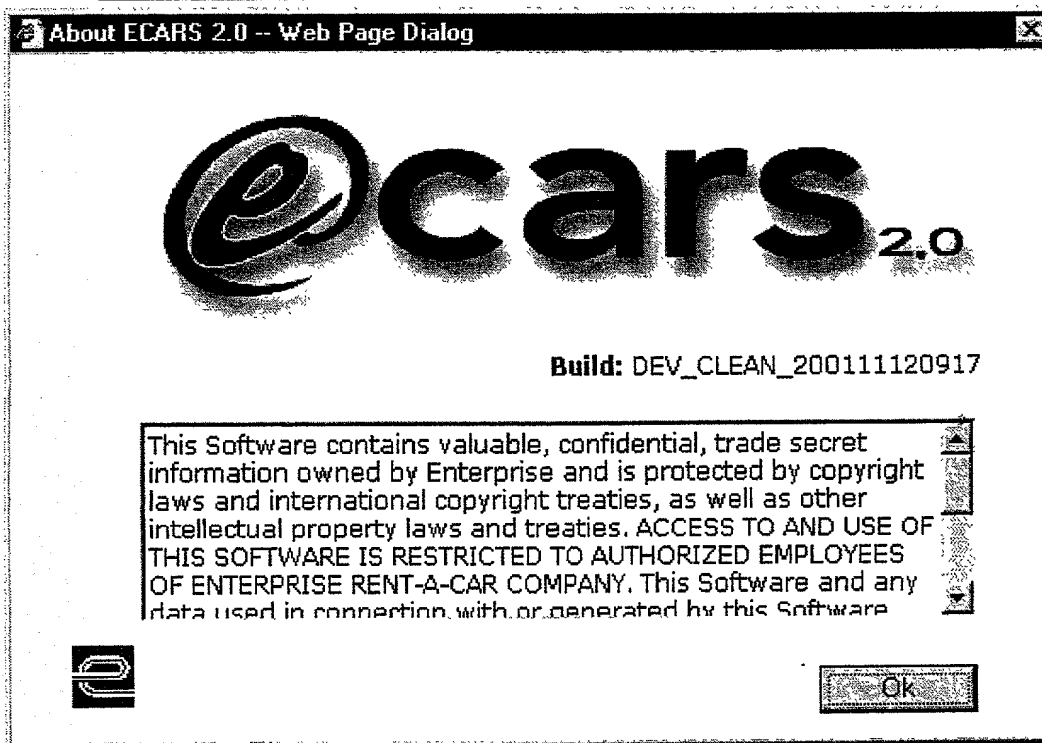
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## About ECARS 2.0 Screen Specification: Version 1.0

### 1. Introduction

This document captures the requirements for the About ECARS 2.0 Page.

### 2. About Screen



Screen Shot

#### 2.1 Title

The title area displays: About ECARS 2.0 -- Web Page Dialog

#### 2.2 ECARS 2.0 Splash Graphic

The ECARS Splash graphic is displayed.

#### 2.3 Build Version Number

The system displays the Build/Version Number to the User.

**Project:**  
ECARS 2.0

**Phase:**  
Inception

**Iteration:**  
N/A

## **2.4 Textual Information Area**

The system displays the Legal Notice: See Sup Spec for Legal Notice.

## **2.5 OK Button**

### **2.5.1 Behavior**

Selecting this button, closes the window.

### **2.5.2 Validation**

### **2.5.3 Business Exceptions**

### **2.5.4 System Exceptions**

## **2.6 Rules**

Navigation: Closing the window, via the X or the OK Button takes the user to the last active screen.

## **2.7 Security**

N/A



Project:  
ECARS 2.0

Phase:  
Inception

Iteration:  
N/A

## ECARS 2.0 Screen Action Specification: Hot Keys for APNS

Version 1.0

Artifact:  
Screen Action Specification

Page:  
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**Project:**  
ECARS 2.0

**Phase:**  
Inception

**Iteration:**  
N/A

## Revision History

Date	Version	Description	Author
12/17/2001	1.0	Created	M. Beard



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## Hot Keys for APNS

### 1. Introduction

This document captures the Hot Keys used in the Application Navigation and Security Project.

### 2. Login Screen

#### 2.1 Login

2.1.1 English Alt-L

2.1.2 En GB Alt-L

2.1.3 En CA Alt-L

2.1.4 En IE Alt-L

2.1.5 Fr CA Alt-L

2.1.6 DE Alt-A

#### 2.2 Clear

2.2.1 English Alt-C

2.2.2 En GB Alt-C

2.2.3 En CA Alt-C

2.2.4 En IE Alt-C

2.2.5 Fr CA Alt-C

2.2.6 DE Alt-L

### **3. Change Password Screen**

#### **3.1 Change Password**

3.1.1 English Alt-P

3.1.2 En GB Alt-P

3.1.3 En CA Alt-P

3.1.4 En IE Alt-P

3.1.5 Fr CA Alt-P

3.1.6 DE Alt-P

#### **3.2 Cancel**

3.2.1 English Alt-C

3.2.2 En GB Alt-A

3.2.3 En CA Alt-C

3.2.4 En IE Alt-A

3.2.5 Fr CA Alt-C

3.2.6 DE Alt-A

#### **4. Mandated Change Password Screen**

##### **4.1 Change Password and Login**

4.1.1 English Alt-L

4.1.2 En GB Alt-L

4.1.3 En CA Alt-L

4.1.4 En IE Alt-L

4.1.5 Fr CA Alt-L

4.1.6 DE Alt-L

##### **4.2 Change Password and Unlock**

4.2.1 English Alt-P

4.2.2 En GB Alt-P

4.2.3 En CA Alt-P

4.2.4 En IE Alt-P

4.2.5 Fr CA Alt-P

4.2.6 DE Alt-P

##### **4.3 Cancel**

4.3.1 English Alt-C

4.3.2 En GB Alt-C

4.3.3 En CA Alt-C

4.3.4 En IE Alt-C

4.3.5 Fr CA Alt-C

4.3.6 DE Alt-C

Project:  
ECARS 2.0

Phase:  
Inception

Iteration:  
N/A

## 5. Lock/Unlock Screen

### 5.1 Unlock

5.1.1 English Alt-U

5.1.2 En\_GB Alt-U

5.1.3 En\_CA Alt-U

5.1.4 En\_IE Alt-U

5.1.5 Fr\_CA Alt-U

5.1.6 DE Alt-E

### 5.2 Clear

5.2.1 English Alt-C

5.2.2 En\_GB Alt-C

5.2.3 En\_CA Alt-C

5.2.4 En\_IE Alt-C

5.2.5 Fr\_CA Alt-C

5.2.6 DE Alt-L

**Project:**  
ECARS 2.0

**Phase:**  
Inception

**Iteration:**  
N/A

## **6. Main Menu**

### **6.1 Reservation**

6.1.1 English Ctrl-Q

6.1.2 En GB Ctrl-Q

6.1.3 En CA Ctrl-Q

6.1.4 En IE Ctrl-Q

6.1.5 Fr CA Ctrl-Q

6.1.6 DE Ctrl-Q

### **6.2 Tickets**

6.2.1 English Ctrl-T

6.2.2 En GB Ctrl-T

6.2.3 En CA Ctrl-T

6.2.4 En IE Ctrl-T

6.2.5 Fr CA Ctrl-T

6.2.6 DE Ctrl-T

### **6.3 Callbacks**

6.3.1 English Ctrl-K

6.3.2 En GB Ctrl-K

6.3.3 En CA Ctrl-K

6.3.4 En IE Ctrl-K

6.3.5 Fr CA Ctrl-K

6.3.6 DE Ctrl-K

### **6.4 Vehicle**

6.4.1 English Ctrl-M

6.4.2 En GB Ctrl-M

6.4.3 En CA Ctrl-M

6.4.4 En IE Ctrl-M

6.4.5 Fr CA Ctrl-M

6.4.6 DE Ctrl-M

**Artifact:**  
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**Project:**  
ECARS 2.0

**Phase:**  
Inception

**Iteration:**  
N/A

## **6.5 Tools**

6.5.1 English Ctrl-J

6.5.2 En\_GB Ctrl-J

6.5.3 En\_CA Ctrl-J

6.5.4 En\_IE Ctrl-J

6.5.5 Fr\_CA Ctrl-J

6.5.6 DE Ctrl-J

## **6.6 Help**

6.6.1 English F1

6.6.2 En\_GB F1

6.6.3 En\_CA F1

6.6.4 En\_IE F1

6.6.5 Fr\_CA F1

6.6.6 DE F1

## **6.7 Lock Application**

6.7.1 English F9

6.7.2 En\_GB F9

6.7.3 En\_CA F9

6.7.4 En\_IE F9

6.7.5 Fr\_CA F9

6.7.6 DE F9

## **7. Rules**

## **8. Security**

**Project:** ECARS 2.0  
**Phase:** Inception  
**Iteration:** N/A

	English (En_US)	En_GB	En_CA	En_IE	Fr_CA	DE
<b>Login Screen</b>						
Login	Alt-L	Alt-L	Alt-L	Alt-L	Alt-L	Alt-A
Clear	Alt-C	Alt-C	Alt-C	Alt-C	Alt-C	Alt-L
<b>Change PW Screen</b>						
Change PW	Alt-P	Alt-P	Alt-P	Alt-P	Alt-P	Alt-P
Cancel	Alt-C	Alt-A	Alt-C	Alt-A	Alt-C	Alt-A
<b>Mandated Change PW Screen</b>						
Change and Login	Alt-L	Alt-L	Alt-L	Alt-L	Alt-L	Alt-L
Change and Unlock	Alt-P	Alt-P	Alt-P	Alt-P	Alt-P	Alt-P
Cancel	Alt-C	Alt-C	Alt-C	Alt-C	Alt-C	Alt-C
<b>Lock/Unlock Screen</b>						
Unlock	Alt-U	Alt-U	Alt-U	Alt-U	Alt-U	Alt-E
Clear	Alt-C	Alt-C	Alt-C	Alt-C	Alt-C	Alt-L
<b>Main Menu</b>						
Reservation	Ctrl-Q	Ctrl-Q	Ctrl-Q	Ctrl-Q	Ctrl-Q	Ctrl-Q
Tickets	Ctrl-T	Ctrl-T	Ctrl-T	Ctrl-T	Ctrl-T	Ctrl-T
Callbacks	Ctrl-K	Ctrl-K	Ctrl-K	Ctrl-K	Ctrl-K	Ctrl-K
Vehicle	Ctrl-M	Ctrl-M	Ctrl-M	Ctrl-M	Ctrl-M	Ctrl-M
Tools	Ctrl-J	Ctrl-J	Ctrl-J	Ctrl-J	Ctrl-J	Ctrl-J
Help	F1	F1	F1	F1	F1	F1
Lock Application	F9	F9	F9	F9	F9	F9





**Project:**

ECARS 2.0

**Phase:**

Inception

**Iteration:**

N/A

**Artifact:**

Screen Action Specification

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**Path:**

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Project:  
ECARS 2.0

Phase:  
Inception

Iteration:  
N/A

## ECARS 2.0 Screen Action Specification: Legal Notice Version 1.1

Enterprise Rent-A-Car  
12/20/01 4:25 PM  
Y:\GROUPS\E-Commerce Group\Patent Materials 8\_31\_01\Copy of All Patents\ECARS20 - Application Navigation & Security\Supplemental Specs\Legal Notice.doc

Artifact:  
Screen Action Specification

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Last saved:  
12/20/01 4:25 PM

Path:  
Y:\GROUPS\E-Commerce Group\Patent Materials 8\_31\_01\Copy of All Patents\ECARS20 - Application Navigation & Security\Supplemental Specs\Legal Notice.doc

**Project:**  
ECARS 2.0

**Phase:**  
Inception

**Iteration:**  
N/A

## Revision History

Date	Version	Description	Author
11/30/01	1.0	Created	M. Beard
11/30/01	1.1	Change per E-Mail from M. Schmitz dated 11/30/01	M. Beard

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## Legal Notice Description

### 1. Introduction

This document contains the wording used in the legal notice currently used on the Login, Unlock, and About Screen in the ECARS 2.0 application.

### 2. Screen Print

N/A

#### 2.1 Legal Notice

##### 2.1.1 Behavior

When required the following Legal Notice shall be displayed to the user:

#### Terms of Use

This Software contains valuable, confidential, trade secret information owned by Enterprise Rent-A-Car Company and is protected by copyright laws and international copyright treaties, as well as other intellectual property laws and treaties. ACCESS TO AND USE OF THIS SOFTWARE IS RESTRICTED SOLELY TO AUTHORIZED EMPLOYEES OF ENTERPRISE RENT-A-CAR COMPANY AND ITS SUBSIDIARIES. This Software and any data used in connection with or generated by this Software may not be licensed, disclosed or used except as authorized in writing by a duly authorized officer of Enterprise Rent-A-Car Company.

© Unpublished. Enterprise Rent-A-Car Company. All rights reserved.

##### 2.1.2 Validation

##### 2.1.3 Business Exceptions

##### 2.1.4 System Exceptions

### 2.2 Rules

### 2.3 Security



**Project:**  
Application Navigation and  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

---

## ECARS 2.0 Screen Action Specification: Lock/Unlock

Version 1.3

**Project:**  
Application Navigation and  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

## Revision History

Date	Version	Description	Author
7/30/2001	Draft	Created	M. Beard
7/31/01	Draft	Changed Cancel to Clear	M. Beard
8/22/01	1.0	Changed Ok to Unlock Added the Lock Icon	M. Beard
8/24/01	1.1	Updated Screen Shot	M.Beard
11/20/01	1.2	Added the Version Number to the Main Requirement.  Added some scenarios to help explain what happens behind the screens with the Database Locking and how Records are presented to the user when Locking/Unlocking the Application. See Locking Rules and Unlocking Behavior.	M. Beard
11/30/01	1.3	Added legal notice  Changed Locked By User ID to a Name  Case Sensitive message is different color	M. Beard



**Project:**  
Application Navigation and  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

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**Project:**  
Application Navigation and  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

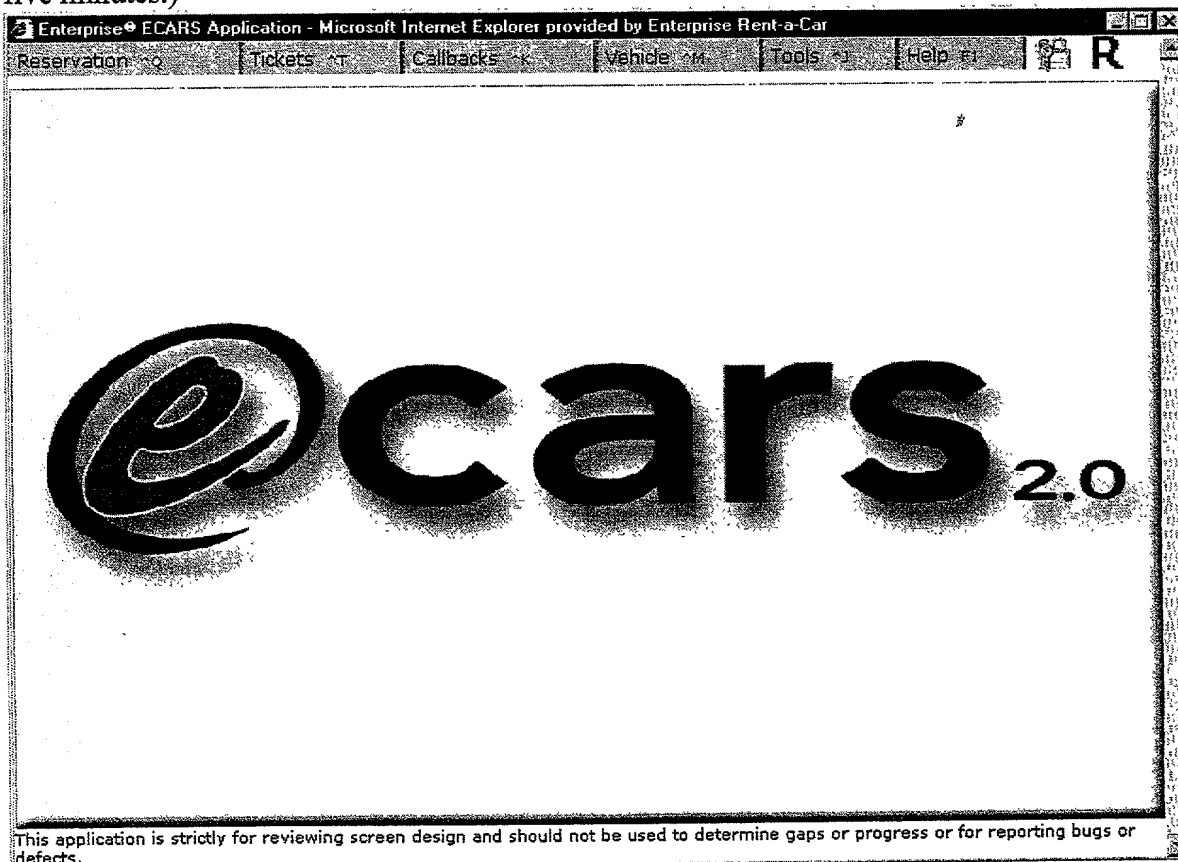
## Lock/Unlock Screen Action Specification Version 1.3

### 1. Introduction

This document captures the behavior and navigation requirements for the Lock/Unlock Screen for the ECARS2.0 Application. This screen is the implementation of the Application Locking Use Case. The Lock/Unlock Screen will be presented to the user when the "Lock Application" function has been invoked successfully.

### 2. Invoking the Lock Function

The Lock function is invoked from the Main Menu by selecting the Lock Icon. This function can also be invoked when the Idle indicator has reached its pre-defined limit. (Currently set at five minutes.)



#### 2.1 Behavior

Upon selection:

Determines the active records.

Invokes the complete function with-in the sub-application

Set the Logged-In flag to False.

**Artifact:**  
Development Case

**Page:**  
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**Last saved:**  
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**Project:**  
Application Navigation and  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

Displays the Lock/Unlock Screen.

## 2.2 Validation

None.

## 2.3 Business Exceptions

None.

## 2.4 System Exceptions

When the system encounters an error, the error message shall be displayed awaiting user input at this point the idle time indicator stops. Clearing the error takes the user to the screen from which the error was generated.

## 2.5 Rules

The Lock Function is available through the "Lock Icon" on the main menu or using the F9 function key.

This function can also be invoked when the Idle indicator has reached its pre-defined limit. Currently, idle timeout is set at five minutes.

This application for Locking/Unlocking the Application should use existing functions within the target sub-applications .

Within Reservation the lock function invokes the Complete Method to save active reservations.

The following is a scenario for the interaction between the application locking and the database locking for completing a reservation. (Note: This same type of scenario will need to be repeated for each sub-application of Callbacks and Open Ticket.)

### Application Lock Record Lock Interaction

- a. If during the time that the User A has reservation 123456 open for edit the application locks.
- b. The lock will call the complete reservation functionality.
  - i. If complete reservation is successful at saving the reservation the lock on the reservation 123456 is removed for User A.
  - ii. If complete reservation is not successful an error message will be displayed and the user must correct any errors before locking the application. (note: the idle timeout does not fire if a window is up with an exception on it)

## 2.6 Security

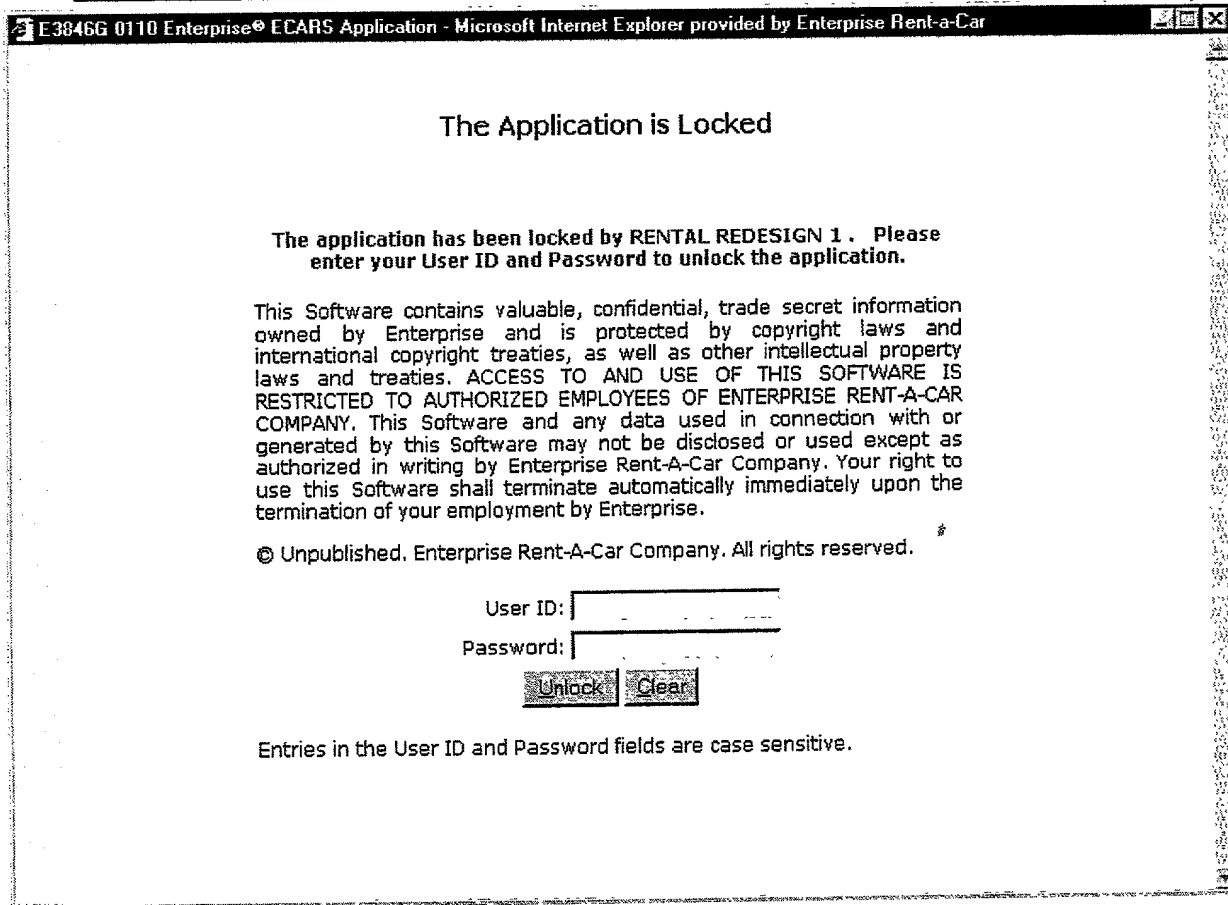
The lock function is not a secured object. This function is available to all users.

**Project:**  
Application Navigation and  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

### 3. Lock/Unlock Screen



The screenshot shows a web browser window titled "E3846G 0110 Enterprise® ECARS Application - Microsoft Internet Explorer provided by Enterprise Rent-a-Car". The main content area displays the message "The Application is Locked". Below this, it states: "The application has been locked by RENTAL REDESIGN 1. Please enter your User ID and Password to unlock the application." A large block of text follows, stating that the software contains valuable, confidential, trade secret information and is protected by copyright laws. It restricts access to authorized employees of Enterprise Rent-A-Car Company and states that any data used in connection with the software may not be disclosed or used except as authorized in writing. The text concludes with "Your right to use this Software shall terminate automatically immediately upon the termination of your employment by Enterprise." Below this is a copyright notice: "© Unpublished. Enterprise Rent-A-Car Company. All rights reserved." There are two input fields: "User ID:" and "Password:". Below the "Password:" field are two buttons: "Unlock" and "Clear". At the bottom, it says "Entries in the User ID and Password fields are case sensitive."

#### 3.1 Information Message

##### 3.1.1 Behavior

Displays the following Text: "The application has been locked by (User Name). Please enter your User ID and Password to unlock the application."

##### 3.1.2 Validation

None.

##### 3.1.3 Business Exceptions

None.

##### 3.1.4 System Exceptions

None.

**Project:**  
Application Navigation and  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

---

### 3.2 Legal Notice

The System displays the Legal Notice to the User. See Sup Spec for wording of the Legal Notice.

### 3.3 User ID

#### 3.3.1 Behavior

Standard User ID field from Login Screen.

#### 3.3.2 Validation

Same as for Log-In.

#### 3.3.3 Business Exception

Same as for Log-In.

#### 3.3.4 System Exceptions

None.

### 3.4 Password

#### 3.4.1 Behavior

Standard Password field from Login Screen.

#### 3.4.2 Validation

#### 3.4.3 Business Exceptions

#### 3.4.4 System Exceptions

### 3.5 Unlock

#### 3.5.1 Behavior

Invokes the Authenticate User Use Case.

Retrieves the Recent File Data.

Determines if the User has rights to the records in the Recent Files.

The following is added for clarification to the interaction between the Unlock Function and the Database Locking/Unlocking function for records.

When User A unlocks the application:

- i. If no users update reservation 123456 while User A has the application locked then when User A unlocks the application they pull reservation 123456 for edit with the updates they made prior to locking the application.
- ii. If User B updated the reservation and saved their updates during the time that User A had the application locked, User A will receive reservation 123456 for edit with the updates that User B applied.

**Project:**  
Application Navigation and  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

iii. If User B still has reservation 123456 open for edit when User A unlocks their application, User A will receive a message that reservation 123456 is open for edit by another user.

Retrieves the data.

Re-establish that the system is active.

Display record(s) as appropriate.

Navigation:

When the User has the same rights as the previous user: The system navigates to last screen the previous user was on with the last record as the active record.

When the User has different rights as compared to the previous user: The user is taken to Main Menu with the splash screen.

While Authenticate User Use Case has control, if an exception is thrown redisplay lock screen or redirect user to the Mandated Change Password Screen as appropriate. Upon successful change of Password display the Main Menu with Splash Screen.

**3.5.2 Validation**

Same as for the Log-In Screen element of "Log-In".

**3.5.3 Business Exceptions**

**3.5.4 System Exceptions**

Same as for the Authenticate User Use Case.

Database Locking conflicts to be handled by the Database Locking UC.

**3.6 Clear**

**3.6.1 Behavior**

Clears both the User ID and Password fields and redisplay the screen along with the "Locked" Message.

**3.6.2 Validation**

**3.6.3 Business Exceptions**

**3.6.4 System Exceptions**

**3.7 Rules**

General: Cursor is placed in the User ID field. Tab Sequence is from top to bottom, left to right. (User Id, tab, Password, tab, OK, tab, Clear.)

**3.8 Security**

This screen is not a secured object.



**Project:**  
Application Navigation and  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

The Unlock function will be available to all users.



**Project:**  
Application Navigation &  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

# **ECARS 2.0**

## **Screen Action Specification: User**

### **Authentication/Change Password Version 1.5**

**Version 1.4**

**Artifact:**  
Development Case

**Page:**  
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**Path:**

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**Project:**  
Application Navigation &  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

## Revision History

Date	Version	Description	Author
05/11/01	1.0	Created	M. Beard
7/16/01	1.1	Updated User Approved Login Screen. Inserted Table of Exceptions. Imported to Reqpro.	M.Beard
8/3/01	1.2	Adding Navigation for the Change Password Screen. Added changes due to the Change PW being mandated by the PasswordExpired Exception. Added new screen for Mandated Change Password	M. Beard
8/16/01	1.3	Changed Cancel on Logon window to Clear. Added function for exit.	M. Beard
10/15/01	1.4	Updated the Error Messages to correspond to the application.	M. Beard
11/6/01	1.5	Added functionality for Change Password from the Unlock Screen.	M. Beard
11/30/01	1.6	Added Legal Notice and Changed Color of Case Sensitive Message	M.Beard



**Project:**  
Application Navigation &  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

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**Project:**  
Application Navigation &  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

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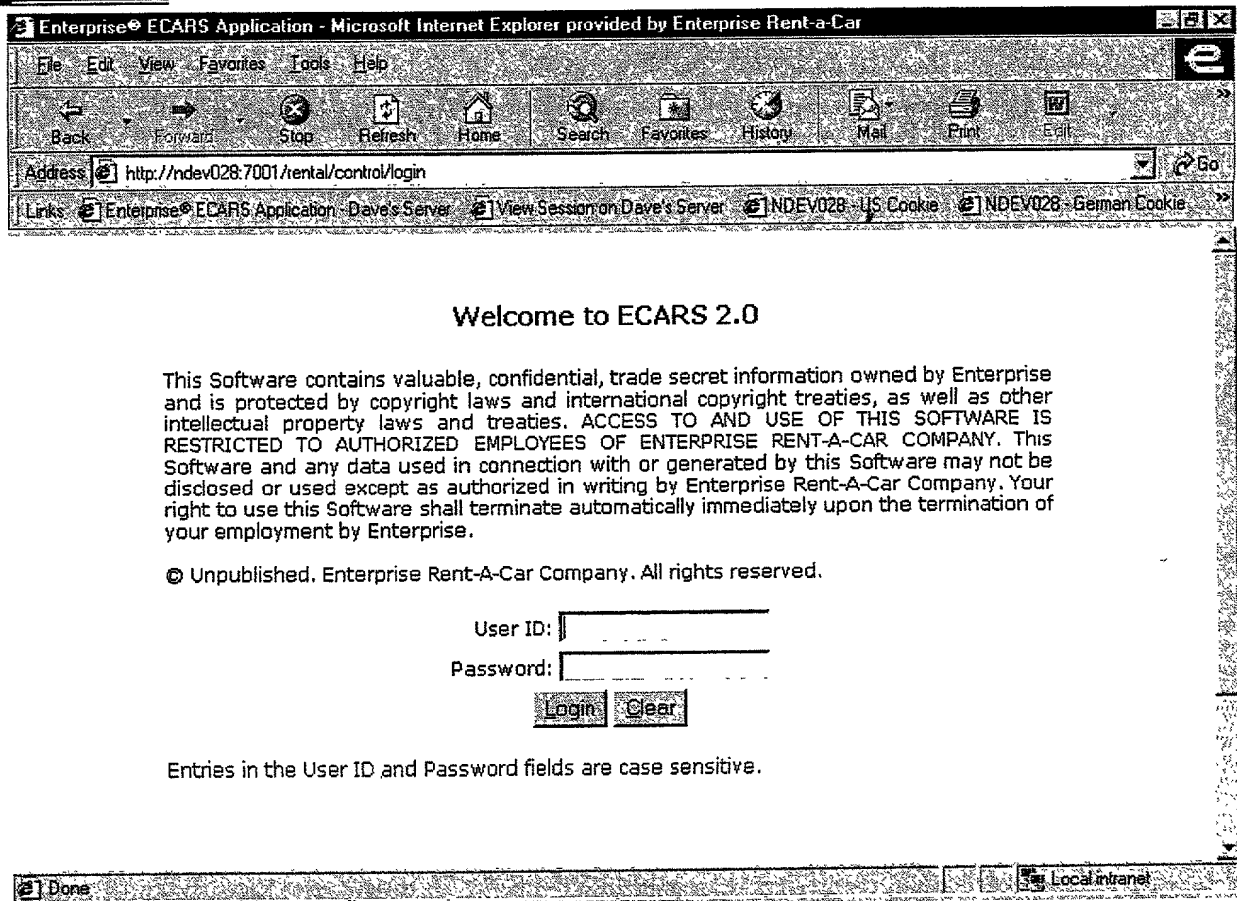
## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the User Authentication process being used for the ECARS2.0 Application. This document will also serve as the starting point for the detailed screen design.

The system must be able to display the proper screen language presentation. This information can be obtained from the calling application ECARS2.0 through the use of the language established in the browser.

### 2. Log-In Screen



Enterprise ECARS Application - Microsoft Internet Explorer provided by Enterprise Rent-A-Car

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit

Address <http://ndev028.7001/rental/control/login> Go

Links [Enterprise ECARS Application - Dave's Server](#) [View Session on Dave's Server](#) [NDEV028 - US Cookie](#) [NDEV028 - German Cookie](#)

Welcome to ECARS 2.0

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User ID:

Password:

Entries in the User ID and Password fields are case sensitive.

Done Local intranet

#### 2.1 Legal Notice

The Legal Notice is presented to the User. See Sup Spec for wording of the Legal Notice.

**Project:**  
Application Navigation &  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

## **2.2 User ID Field**

### **2.2.1 Behavior**

This is an alphanumeric data entry field. Minimum length is 6; maximum is to be consistent with the Application Security System. What is expected here is "E \_ \_ \_ \_ \_". The "E" will not be pre-populated. Items are case sensitive.

### **2.2.2 Validation**

None.

### **2.2.3 Business Exceptions**

None.

### **2.2.4 System Exceptions**

None.

## **2.3 Password Field**

### **2.3.1 Behavior**

This is an alphanumeric data entry field. Minimum length of 6 with a maximum of 30. What is expected here is the User's password. The displayed information will be masked by the "\*" character. The information in this field will also need to be encrypted, as to not allow its contents to be viewed through the "View Source" browser option.

### **2.3.2 Validation**

None.

### **2.3.3 Business Exceptions**

None.

### **2.3.4 System Exceptions**

None.

## **2.4 Login Button**

### **2.4.1 Behavior**

This operation will take the inputs from the User ID and Password fields along with the Application Name and invoke the "Authenticate User" method in the Application Security System.

#### **Navigation:**

- When login is successful, takes the user to the ECARS 2.0 Main Menu with the splash image displayed.
- When the system throws an error, display error in an error message box, canceling the error takes the user back to the login screen.
- When the error is the Password Expired Exception (case where the user must change their password to proceed), direct the user to the Change Password Screen with the Password Expired Error Message displayed.



**Project:**  
Application Navigation &  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

---

Note: The user can access the Change PW screen by selecting that screen or by Closing the Error Message Window. (This is a general note and really applies to all Error Message Windows.)

#### 2.4.2 Validation

No local validation, Application Security System will use the input for its validation.

#### 2.4.3 Business Exceptions

None.

**Project:**  
Application Navigation &  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

#### 2.4.4 System Exceptions

Throw	DEF	Show as Error Message
InvalidInputException	This exception occurs when an input parameter is invalid. Typically this is generated by passing in any kind of null value into a required field.	<u>Insufficient Information Entered. Please re-submit your request.</u>
ArchSecurityException	This exception is the base class for any exception that can be thrown from the Security Architecture. It also can be thrown if an unexpected error occurs, such as a network problem, database error, etc.	<u>Authentication Failed. Re-submit your request.</u>
InvalidAuthenticationException	This exception occurs when an invalid username or password is passed to authenticateUser.	<u>Invalid User Name/Password. Verify the CAPS LOCK function is off.</u>
NoAccessToAppException	This exception occurs when the user has no access to the application.	<u>Security Access Denied.</u>
PasswordExpiredException	This exception occurs when the user's password is expired.	<u>Password Expired. Please Enter New Password.</u>
UserLockedOutException	This exception occurs when the user has been locked out of the security system.	<u>You have been locked out of the system. Please contact your designated network administrator.</u>

## 2.5 Clear Button

### 2.5.1 Behavior

Clears the Values of User ID and Password

### 2.5.2 Validation

None.

### 2.5.3 Business Exceptions

None.

### 2.5.4 System Exceptions

None.

**Artifact:**  
Development Case

**Page:**  
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**Path:**

**Last saved:**  
12/20/01 4:28 PM



**Project:**  
Application Navigation &  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

---

## **2.6 Exiting the Application**

Exiting the application can be accomplished by selecting the "X" in the upper right hand corner of the application window.



**Project:**  
Application Navigation &  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

---

## **2.7 Rules**

### **Tab Order:**

The cursor shall be placed in the Login Field upon entry to the screen. Tabbing off the Login field shall change focus to the Password field. Tabbing off the Password field shall change focus to the Login button. Tabbing off the Login button shall change focus to the Cancel button.

No data checking is being performed at the screen level.

## **2.8 Security**

Passwords shall be encrypted: On screen the typed password shall be masked with the "\*" character. The user shall not be able to view the plain text password when using the "View Source" option in the browser.



**Project:**  
Application Navigation &  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

### 3. Change Password Screen

Enterprise ECARS Application - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Reservation Contracts Callbacks Rates Tools Help

Change Password

User ID: E3846G

Existing Password:

New Password:

Confirm New Password:

Change Password Cancel

#### 3.1 User ID Field

##### 3.1.1 Behavior

Same properties as User ID from Login Screen. Pre-populated with the existing user's ID.

##### 3.1.2 Validation

None.

##### 3.1.3 Business Exceptions

None.

##### 3.1.4 System Exceptions

None.

**Project:**  
Application Navigation &  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

### **3.2 Existing Password Field**

#### **3.2.1 Behavior**

Same properties as Password field on the Login Screen.

#### **3.2.2 Validation**

None.

#### **3.2.3 Business Exceptions**

None.

#### **3.2.4 System Exceptions**

None.

### **3.3 New Password Field**

#### **3.3.1 Behavior**

Same properties as Password field on the Login Screen.

#### **3.3.2 Validation**

None.

#### **3.3.3 Business Exceptions**

None.

#### **3.3.4 System Exceptions**

None.

### **3.4 Confirm New Password Field**

#### **3.4.1 Behavior**

Same properties as Password field on the Login Screen.

#### **3.4.2 Validation**

None.

#### **3.4.3 Business Exceptions**

None.

#### **3.4.4 System Exceptions**

None.

### **3.5 Change Password Button**

#### **3.5.1 Behavior**

This field starts the process to change the User's password in the Application Security System. Prior to invoking the "Change Password" function, some validation is done at the screen level.

**Project:**  
Application Navigation &  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

When the Change Password Function is successful, Display the following test message on the Change Password Screen: "Your password has been successfully changed!" Navigation off this screen is accomplished through the main menu.

### 3.5.2 Validation

This interface checks that the "New Password" and the "Confirm New Password" fields contain the same information. Once this has been established the packet can be sent to the Application Security System for its processing.

### 3.5.3 Business Exceptions

None.

### 3.5.4 System Exceptions

Throw	DEF	Show as Error Message
Password Mismatch	New Password and Confirm New Password do not match.	<u>The passwords you typed do not match. Please re-submit your request.</u>
ArchSecurityException	This is thrown when an unexpected exception occurs	<u>Authentication Failed, Re-submit your request.</u>
InvalidAuthenticationException	This exception is thrown when either the user inputs an invalid username or password.	<u>Invalid User Name/Password. Verify the CAPS LOCK function is off.</u>
BadPasswordException	This exception is thrown if a user inputs a new password that is less than six characters, longer than 30 characters, or repeats any of the last 5 passwords that this user has had before.	<u>Your password must be between six and thirty characters in length and must not match one of the five previous passwords.</u>
UserLockedOutException	This exception is thrown when a user is locked out of the Security Framework.	<u>You have been locked out of the system. Please contact your designated network administrator.</u>
InvalidInputException	This is thrown if any of the input strings are null.	<u>Enter data into all the fields.</u>
Old password new password match		<u>The new password must not match the current password.</u>

**Project:**  
Application Navigation &  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

---

### **3.6 Cancel Button**

#### **3.6.1 Behavior**

Cancels the Change Password function and returns the user to the Main Menu with the splash screen displayed.

#### **3.6.2 Validation**

None.

#### **3.6.3 Business Exceptions**

None.

#### **3.6.4 System Exceptions**

If the Change Password function was enacted from "Conditional Log-On – User Must Change Password to Proceed" and Cancel has been select prior to the password being changed successfully, the ECARS2.0 Application shall return to the Login Screen. If the Change Password function was invoked from the menu, the Cancel will take the user back to the Main Menu "Splash" Screen.

### **3.7 Rules**

User ID is pre-populated . Upon entry to the screen, cursor will be positioned in the Existing Password Field. Tab order: Top to Bottom, Left to Right. New Password and Confirm New Password shall be checked to ensure they are the same prior to sending to the Application Security System. This is not a check to ensure the passwords conform to length or repeating rules. Those checks are handled by the central security system.

### **3.8 Security**

Passwords shall be encrypted: On screen the typed password shall be masked with the "\*" character. The user shall not be able to view the plain text password when using the "View Source" option in the browser.

**Project:**Application Navigation &  
Security**Phase:**

Inception

**Iteration:**

N/A

**4. Mandated Change Password Screen**

This is the Mandated Change Password screen; this screen will be shown when the user must change their password to gain entry into the ECARS 2.0 Application. There are currently two paths to get to this screen: The primary method is when the user is logging into the system and their password is expired and the alternate method is when the user is attempting to unlock the application and their password has expired. This case will be referred to as the Variation 1. After the password has been changed successfully, the system automatically invokes the Authenticate User (Login) or when invoked from the Unlock Screen the system invokes the Unlock System functionality.. Since this screen uses many of the same functions and behaviors from the main Change Password Screen, only the differences will be documented as requirements.

Primary Screen Shot: User attempting to login to the systems and their password is expired.

**Artifact:**

Development Case

**Page:**

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**Path:**

Y:\GROUPS\E-Commerce Group\Patent Materials 8\_31\_01\Copy of All Patents\ECARS20 - Application Navigation & Security\Supplemental Specs\Login Screen Spec..doc

**Last saved:**

12/20/01 4:28 PM

**Project:**  
Application Navigation &  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

Enterprise ECARS Application - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss

Address <http://localhost:7001/rental/control/login/changePasswordFromLogin> Go Links

Change Password

User ID:

Existing Password:

New Password:

Confirm New Password:

Done Local intranet

**Project:**  
Application Navigation &  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

Variation 1: User is attempting to Unlock the application and their password is expired.

E3846G 0101 Enterprise® ECARS Application - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

## Change Password

User ID:

Existing Password:

New Password:

Confirm New  
Password:

Change Password & Unlock

Cancel

### 4.1 User ID

#### 4.1.1 Behavior

This is an editable text box. Will be pre-populated with User ID typed into the Login Screen or Unlock Screen.

#### 4.1.2 Validation

None.

**Artifact:**  
Development Case

**Page:**  
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**Path:**

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**Project:**  
Application Navigation &  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

#### 4.1.3 Business Exceptions

None.

#### 4.1.4 System Exceptions

None.

### 4.2 Change Password & Login Button    Variation: Change Password & Unlock Button

#### 4.2.1 Behavior

This field starts the process to change the User's password in the Application Security System.  
Prior to invoking the "Change Password" function, validation is done at the screen level.  
After the Change Password Function is successful, the system invokes the Login function automatically.  
Variation: After the Change Password Function is successful, the system invokes the Unlock function automatically.  
Upon successful login the system displays the Main Menu with the splash screen.  
Variation: Successful Unlocking takes the user to the appropriate screen as dictated by the Unlock Functionality.

#### 4.2.2 Validation

During the Change Password portion: Same as for the Change Password Button from the Change Password Screen.

During the Login Portion: Same as the Login Button on the Login Screen.

Variation: During the Unlock Portion. Same as the Unlock Button on the Unlock Screen.

#### 4.2.3 Business Exceptions

During the Change Password portion Same as for the Change Password Button from the Change Password Screen.

During the Login Portion: Same as the Login Button on the Login Screen.

Variation: During the Unlock Portion. Same as the Unlock button on the Lock/Unlock Screen.

#### 4.2.4 System Exceptions

During the Change Password portion: Same as for the Change Password Button from the Change Password Screen. Closing the error message takes the user back to where this function was invoked.

During the Login Portion: Same as the Login Button on the Login Screen. Closing an error message take the user to the Login Screen.

Variation: During the Unlock Portion. Same as the Unlock Button on the Unlock Screen. Closing an error message takes the user to the Lock/Unlock Screen.

### 4.3 Cancel Button

#### 4.3.1 Behavior

Once selected, takes the user back to the Login Screen.

Variation: Once selected, takes the user back to the Lock/Unlock Screen.





**Project:**  
Application Navigation &  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

---

4.3.2 Validation

None at this point.

4.3.3 Business Exceptions

None.

4.3.4 System Exceptions

None.

**Artifact:**  
Development Case

**Page:**  
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**Path:**  
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**Project:**  
Application Navigation /  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

---

# ECARS 2.0

## Screen Action Specification: Main Menu

Version 1.10

**Project:**  
Application Navigation /  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

## Revision History

Date	Version	Description	Author
07/19/01	1.0	Created	M. Beard
7/20/01	1.1	Moved into ReqPro	M. Beard
7/26/01	1.2	<ul style="list-style-type: none"> <li>- Changed Estimate Total Charges to Rates Test Window</li> <li>- Main Heading of Contracts to Tickets</li> </ul>	
8/2/01	1.3	Rebuilt in ReqPro, marking requirements	M. Beard
8/5/01	1.4	Removed Exit as a Requirement Re-Arranged the order within Sub-Apps Added Short-Cut Keys Changed Res New to the Driver Search Screen Changed Res Notification from ARMS Res Results to Res Notification Screen Changed Res Forecast to Forecasting	M. Beard
8/6/01	1.5	Added Exit back into the screen spec	M. Beard
8/7/01	1.6	Changed hot key for Help to F1 key.	M. Beard
8/24/01	1.7	Changed how the Lock Function is accessed: removed from Tools Menu Item to using the Lock Icon. Updated all Screen shots to correspond to the current build.	M. Beard
8/31/01	1.8	Added the short-cut of F9 to the Lock Function. Under the Tools menu changed Tax/Surcharges to read Taxes and Surcharges Selecting Tools now directs the user to the Tools Sub-Application Screen.	M. Beard
10/25/01	1.9	Added the usability requirements for the highlighting of menu items and changing the cursor to the link cursor. (Section 2.9.5)	M. Beard
11/12/01	1.10	Add reference to the About ECARS 2.0 Screen Action Spec	M. Beard

**Project:**  
Application Navigation /  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

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**Project:**  
Application Navigation /  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

## Main Menu Screen Action Specification Version 1.10

### 1. Introduction

This document will describe the behavioral characteristics associated with the ECARS2.0 Application Menus. This document will also serve as the starting point for the detailed screen design.

The system must be able to display the proper screen language presentation. This information can be obtained from the LOCALE information stored in ELOCATION for the session.

### 2. Main Menu Screen

Reservation	Tickets	Callbacks	Tools	Vehicle	Help
Detail	Search	Summary	Change Password		Web ECARS Help
Summary	New	Search	Rates Test Window		About
Forecasting			Rates and Rules		
Notification			Reports		
Search			Taxes and Surchrges		
New					



**Project:**  
Application Navigation /  
Security

**Phase:**  
Inception

**Iteration:**  
N/A



**Artifact:**  
Development Case

**Page:**  
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**Project:**  
Application Navigation /  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

## 2.1 Reservation



### 2.1.1 Behavior

Mouse Over on the Reservation will display the following sub-functions: , Detail, Summary, Forecast, Notification, Search, and New.

Selection of Reservation performs the same function as selecting Detail.

Short Cut Key for Reservation is Ctrl q.

Selecting the Reservation sub-function navigates the user to the following Reservation Screen:

New – Driver Search Screen

Detail - Reservation Daily Activity Detail Screen

Summary - Reservation Summary Screen

Forecasting - Reservation Forecast Screen

Notification - Reservation Notification Screen

Search – Reservation Search Screen



**Project:**  
Application Navigation /  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

---

#### 2.1.2 Validation

Once on a screen, selection of another function requires at least the minimum information be filled in on the current screen, else an error message is displayed. (Note: This is not a function of the Main Menu.)

#### 2.1.3 Business Exceptions

None.

#### 2.1.4 System Exceptions

None at this point.



**Project:**  
Application Navigation /  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

## 2.2 Tickets



### 2.2.1 Behavior

Mouse over Tickets display the sub-functions: Search and New.

Selection of Tickets performs the same function as selecting Search.

Short Cut Key for Tickets is Ctrl t.

Selecting the sub-function navigates the user to the following Ticket Screen:

Search – Ticket Search Screen

New – Create a Ticket Screen

### 2.2.2 Validation

Once on a screen, selection of another function requires at least the minimum information be filled in on the current screen, else an error message is displayed. (Note: This is not a function of the Main Menu.)

**Project:**  
Application Navigation /  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

### 2.2.3 Business Exceptions

None.

### 2.2.4 System Exceptions

None at this point.

## 2.3 Callbacks



### 2.3.1 Behavior

Mouse over display the sub-functions: Summary and Search.

Selection of Callbacks performs the same function as selecting Summary.

Short Cut Key for Callbacks is Ctrl k.

Selecting the sub-function navigates the user to the following Callbacks Screen:

Summary – Callback Summary Screen

Search – Callback Search Screen



**Project:**  
Application Navigation /  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

---

### 2.3.2 Validation

Once on a screen, selection of another function requires at least the minimum information be filled in on the current screen, else an error message is displayed. (Note: This is not a function of the Main Menu.)

### 2.3.3 Business Exceptions

None.

### 2.3.4 System Exceptions

None at this point.

**Project:**  
Application Navigation /  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

## 2.4 Tools



### 2.4.1 Behavior

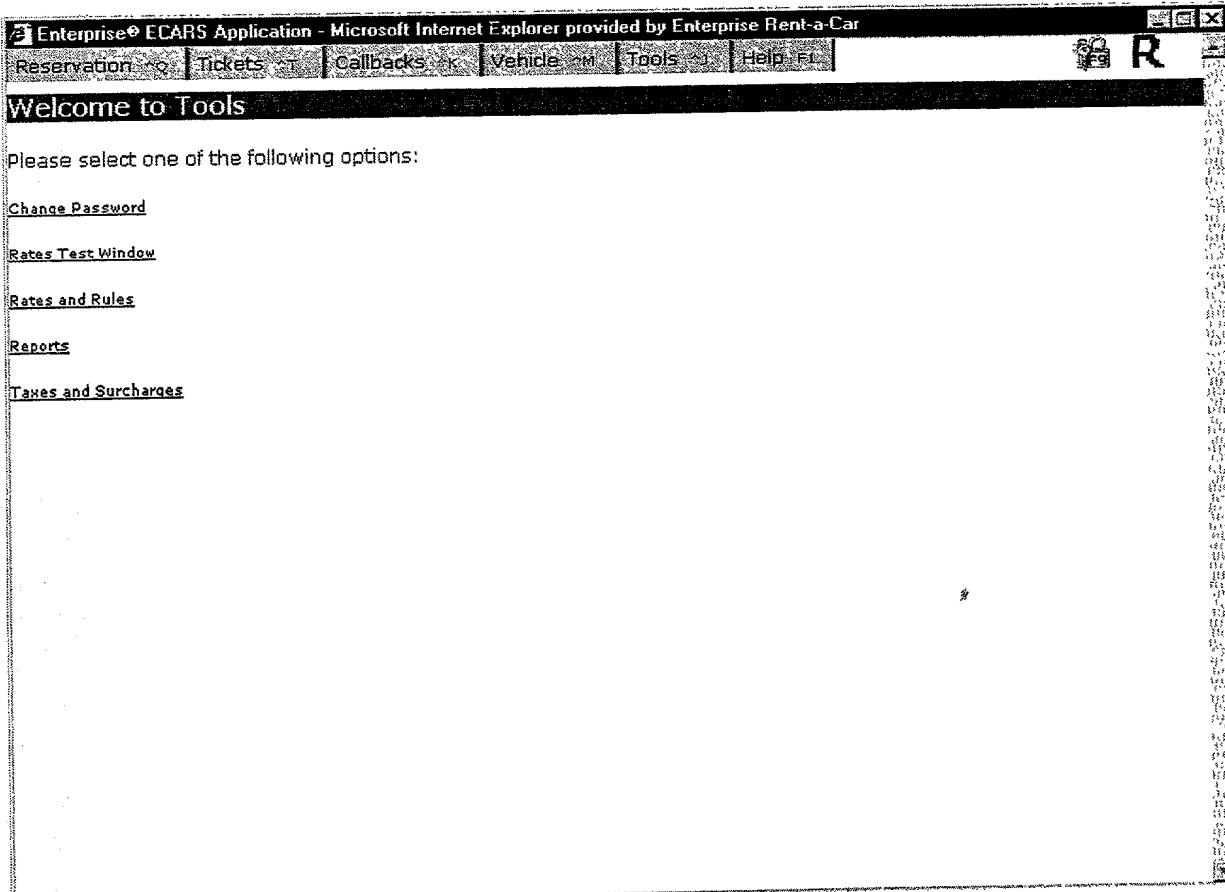
Mouse over displays the following sub-functions: Change Password, Rates Test Window, Rates and Rules, Reports, Taxes and Surcharges.

Selection of Tools takes the user to the Tools Screen.

**Project:**  
Application Navigation /  
Security

**Phase:**  
Inception

**Iteration:**  
N/A



Short Cut Key for Tools Screen is Ctrl i.

Selecting the sub-function navigates the user to the following Tools Screen:

Change Password – Change Password Screen

Rates Test Window – Rates Test Window Screen

Rates and Rules – Rates Rule Maintenance Screen

Reports – Reports Selection Screen

Taxes and Surcharges – Tax/Surcharges Maintenance Screen

#### 2.4.2 Validation

Once on a screen, selection of another function requires at least the minimum information be filled in on the current screen, else an error message is displayed. (Note: This is not a function of the Main Menu.)

#### 2.4.3 Business Exceptions

None.

#### 2.4.4 System Exceptions

None at this point.

**Artifact:**  
Development Case

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**Path:**

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**Project:**  
Application Navigation /  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

---

## **2.5 Vehicle**

### **2.5.1 *Behavior***

This has been inserted to take the user to the Vehicle Maintenance Sub-Application.

Mouse over display the sub-functions:

Selection of Vehicle performs the same function as selecting -----.

Short Cut Key for Vehicle is Ctrl m.

### **2.5.2 *Validation***

Once on a screen, selection of another function requires at least the minimum information be filled in on the current screen, else an error message is displayed. (Note: This is not a function of the Main Menu.)

### **2.5.3 *Business Exceptions***

None.

### **2.5.4 *System Exceptions***

None at this point.

**Project:**  
Application Navigation /  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

## 2.6 Help



### 2.6.1 Behavior

Mouse over display the sub-functions: Web ECARS Help and About.  
Selection of Help performs the same function as selecting Web ECARS Help.  
Short Cut Key for Help is the F1 key.

Selecting the sub-functions navigates the user to the following Help Screen.

Web ECARS Help

About – Directs the User to the About ECARS 2.0 Screen.

See About ECARS 2.0 Screen Action Specification

### 2.6.2 Validation

None at this point, this should be available at all times.

### 2.6.3 Business Exceptions

None.

**Project:**Application Navigation /  
Security**Phase:**

Inception

**Iteration:**

N/A

#### 2.6.4 System Exceptions

None at this point.

### 2.7 Lock Function

The Lock Functionality is available through the "Lock" Icon.The short-cut key for the Lock Function is the F9 key.The lock function may also be started by the idle time indicator.

### 2.8 General Functions

#### 2.8.1 Exiting the Application

Exiting the application is accomplished by selecting the X button at the top of the browser.

#### 2.8.2 Minimizing the Application

Minimizing the application is accomplished by selecting the button at the top of the browser.

### 2.9 Rules

#### 2.9.1 Navigation through the use of arrow keys:

Selecting the Control key takes the user to the Reservation Menu Item, navigation between main menu items can be accomplished by using the left and right arrow keys. Once focus is on the appropriate main menu item, selection can be accomplished with the "Enter" key.

#### 2.9.2 Mouse-Over:

Mouse over on the main menu items displays its associated sub-functions.

#### 2.9.3 System Exception Overall:

An error message shall be displayed when a link is not available. Display "The selected functionality is not available at this time."

#### 2.9.4 Language:

The menu will be displayed based on the language setting contained in the e-locale information.

#### 2.9.5 Usability

When a menu item block gains focus, display color will change indicating the item has focus.When the cursor is placed on a link, the cursor will change to the normal select hand.Once inside the system, the User's ID and Location (Group/Branch) should be displayed in the browser header.





**Project:**  
Application Navigation /  
Security

**Phase:**  
Inception

**Iteration:**  
N/A

---

## 2.10 Security

This screen is presented based upon the user's "secured objects" listing. These are maintained within the Application Security System. Painting of sub-screens and menus, will be based upon the users security rights within the particular sub-application.

Version: <b>&lt;1.0&gt;</b> Date: 9/14/01	
Secured Object Name User Secured Object Matrix	

Secured Object Name	Secured Object Description	Manager				Rtl Emp				Prep / Drvr			
		C	R	U	D	C	R	U	D	C	R	U	D
<b>ECARS 2.0 Main Menu</b>													
<b>Reservation</b>													
MNU RES	Main menu heading for the Reservation sub-application.												
MNU RES NEW	Enables the user to Create a New Reservation.	T											
MNU RES DETAIL	Enables the user to view the Reservation Daily Activity Detail Screen.	T											
MNU RES SUM	Enables the user to view the Reservation Summary Screen.	T											
MNU RES FORECAST	Enables the user to view the two-week Reservation Forecast Screen.	T											
MNU RES NOTIFY	Enables the user to view the ARMS Reservation Results.	T											
MNU RES SEARCH	Enables the user to view the Search Screen.	T											
<b>Tickets</b>													
MNU TKT	Main menu heading for the Contract sub-application.	T											
MNU TKT SEARCH		T											
MNU TKT NEW		T											
<b>Callbacks</b>													
MNU CBK	Main menu heading for the Callback sub-application.	T											
MNU CBK SEARCH		T											
MNU CBK SUM		T											
<b>Tools</b>													
*MNU TLS	Main menu heading for Tools sub-application.												
MNU TLS RATESTEST	Enables user access to the Rates Test Window.	T											
WIN													
MNU TLS REPORTS	Enables user access to the Reports Area.	T											





Project:  
ECARS 2.0

Phase:  
Inception

Iteration:  
N/A

# ECARS 2.0 Screen Action Specification: Multiple Session Error Message

Version 1.0

Artifact:  
Sup Spec – Screen Spec

Page:  
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Last saved:  
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Path:

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**Project:**  
ECARS 2.0

**Phase:**  
Inception

**Iteration:**  
N/A

## Revision History

Date	Version	Description	Author
9/21/01	1.0	Created	M. Beard

**Artifact:**  
Sup Spec - Screen Spec

**Page:**  
2 of 5  
**Path:**

**Last saved:**  
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**Project:**  
ECARS 2.0

**Phase:**  
Inception

**Iteration:**  
N/A

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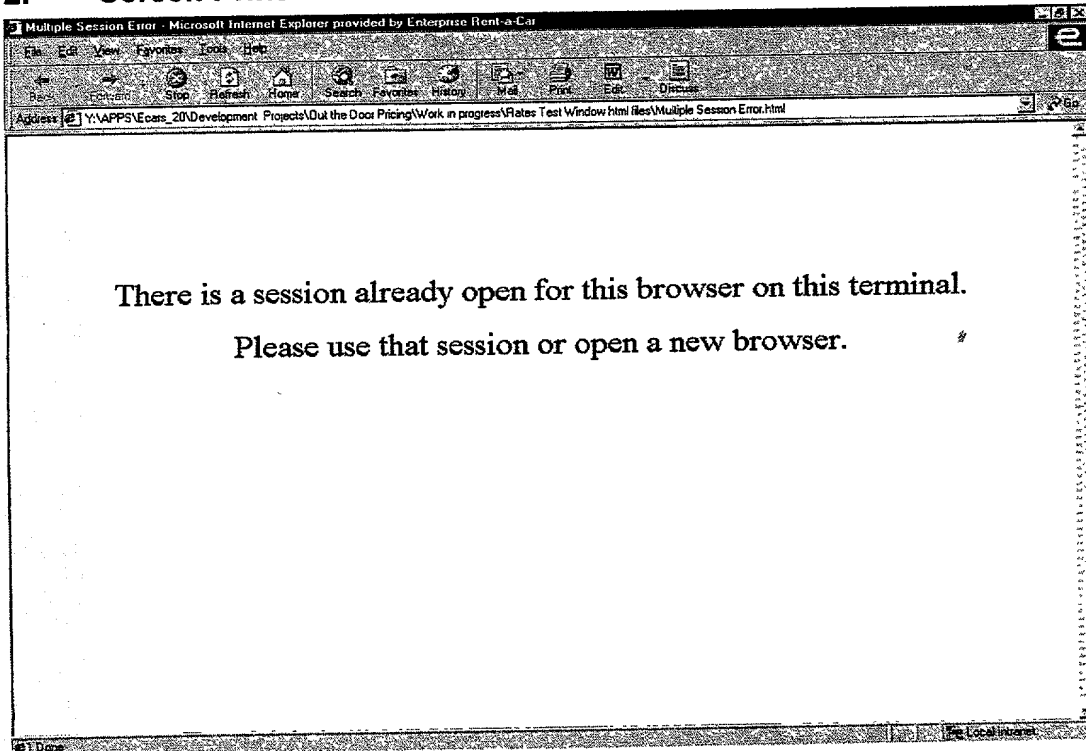
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## Error Message – Session Already Exists for this Browser Instance

### 1. Introduction

This document captures the Error Message generated when the user attempts to open a new session on the terminal without opening a new instance of the IE browser.

### 2. Screen Print



#### 2.1 Error Message

##### 2.1.1

##### 2.1.2 Behavior

When the user attempts to open a new session on the same terminal without opening a new instance of the browser, display the following error message:

"There is a session already open for this browser on this terminal.  
Please use that session or open a new browser."

For Informational purposes: This situation can occur when the user attempts to open the active session by selecting the window titled "About" and uses the "back" button to navigate to the previous page.



**Project:**  
ECARS 2.0

**Phase:**  
Inception

**Iteration:**  
N/A

---

- 2.1.3 Validation
- 2.1.4 Business Exceptions
- 2.1.5 System Exceptions
- 2.2 Rules
- 2.3 Security

**Artifact:**  
Sup Spec - Screen Spec

**Page:**  
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**Path:**

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**Project:**  
Application Navigation/User  
Authentication

**Phase:**  
Inception

**Iteration:**  
N/A

---

## Supplementary Specification: Secured Objects Listing ECARS2.0 Program

Version 1.1

**Project:**  
Application Navigation/User  
Authentication

**Phase:**  
Inception

**Iteration:**  
N/A

## Revision History

Date	Version	Description	Author
07/19/01	Draft	Created	M. Beard
7/26/01	Draft	Made change IAW Jeff Boehne Review <ul style="list-style-type: none"> <li>- Added Vehicle Sub-App</li> <li>- Abbreviated Names</li> <li>- Changed Quote a Rate to Rates Test Window</li> <li>- Removed Sub-Application Menu items</li> <li>- Added Secured Object descriptions</li> </ul>	M. Beard
7/26/01	1.0	Loaded into ReqPro	M. Beard
7/26/01	1.1	Changed main heading from Contracts to Tickets (CON to TKT)  Unmarked secured object of Tools and Change PW, will always be available.	M. Beard

**Project:**  
Application Navigation/User  
Authentication

**Phase:**  
Inception

**Iteration:**  
N/A

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**Project:**  
Application Navigation/User  
Authentication

**Phase:**  
Inception

**Iteration:**  
N/A

## Secured Object Listing: ECARS2.0 Program

### 1. Introduction

This document captures the naming convention and names used throughout the ECARS2.0 Application for its secured objects. The System will interface with the Application Security System, which is used to administer and house the listing of secured objects and authorized users.

#### 1.1 Purpose

To document the naming convention used between ECARS2.0 Application and Application Security System. These names will also be used to administer "Security" throughout the ECARS2.0 Application.

#### 1.2 Scope

Only interface requirements between the ECARS2.0 Application its sub-applications and the Application Security System.

#### 1.3 Definitions, Acronyms and Abbreviations

- 1.3.1 *Secured Object* – Method of identifying program functionality to which security will be applied. This can be the whole application, a sub-application, menu items, a page within the application, or even a function on a particular application page.
- 1.3.2 *Secured Object Rights* – Each Secured Object will have associated Right(s) for the user. The domain values are: Create, Read, Update, and Void. It will be the responsibility of each sub-application to determine the level of access for each of these values.

#### 1.4 References

See Use Case – Launch Application\_User Authentication  
Application Security System Java.doc  
User set-up matrix for the Main Menu Security. (See file: secured object matrix.SUP)

#### 1.5 Overview

The next section will define the Secured Objects used within the ECARS2.0 Application.

### 2. Functionality

#### 2.1.1 ECARS2.0 Application

Application Name (max length 30)	Application Description (max length 256)
<u>ECARS 2.0</u>	This is the ECARS2.0 Application with its associated sub-applications of: Callbacks, Contracts, Reservations, Vehicle, and Rates/Rules/Taxes and Surcharges.

**Project:**  
Application Navigation/User  
Authentication

**Phase:**  
Inception

**Iteration:**  
N/A

### 2.1.2 ECARS2.0 sub-applications and Secured Objects Registered with Application Security

The general naming convention for Secured Objects will be:

- Sub-Application Name + “\_” + Window Name + “\_” + Field Name
- Names are case sensitive.

Secured Object Name (max length 200)	Secured Object Description (max length 256)
<b><u>ECARS 2.0 Main Menu</u></b>	
<b><u>Reservation</u></b>	
<u>MNU RES</u>	Main menu heading for the Reservation sub-application.
<u>MNU RES NEW</u>	Enables the user to Create a New Reservation.
<u>MNU RES DETAIL</u>	Enables the user to view the Reservation Daily Activity Detail Screen.
<u>MNU RES SUM</u>	Enables the user to view the Reservation Summary Screen.
<u>MNU RES FORECAST</u>	Enables the user to view the two-week Reservation Forecast Screen.
<u>MNU RES NOTIFY</u>	Enables the user to view the ARMS Reservation Results.
<u>MNU RES SEARCH</u>	Enables the user to view the Search Screen.
<b><u>Tickets</u></b>	
<u>MNU TKT</u>	Main menu heading for the Ticket sub-application.
<u>MNU TKT SEARCH</u>	
<u>MNU TKT NEW</u>	
<b><u>Callbacks</u></b>	
<u>MNU CBK</u>	Main menu heading for the Callback sub-application.
<u>MNU CBK SEARCH</u>	
<u>MNU CBK SUM</u>	
<b><u>Tools</u></b>	
<u>MNU_TLS</u>	Main menu heading for Tools sub-application. (No security needed)
<u>MNU_TLS RATESTESTWIN</u>	Enables user access to the Rates Test Window.
<u>MNU_TLS REPORTS</u>	Enables user access to the Reports Area.
<u>MNU_TLS RATESRULES</u>	Enables user access to the Rates/Rules management screens.
<u>MNU_TLS TAXSURCHARGE</u>	Enables user access to the Taxes and Surcharges management screens.
<u>MNU_TLS CHNGPW</u>	Enables user to Change their Password within the

**Project:**  
Application Navigation/User  
Authentication

**Phase:**  
Inception

**Iteration:**  
N/A

	Application Security System. (No security needed)
<b>Vehicle</b>	
<u>MNU VHC</u>	Main menu heading for the Vehicle maintenance sub-application.

Since all uses should have access to "Help" and "Exit" functions, no secured object is associated to these functions. Also, the function for Change Password will always be present. Hotkeys

Reservation	Tickets	Callbacks	*Tools	Vehicle	*Help
Detail	Search	Summary	*Change Password		*Web ECARS Help
Summary	New	Search	Rates Test Window		*About
Forecasting			Rates and Rules		
Notification			Reports		
Search			Tax Surcharge		
New			* Lock Application		

\* Denotes always present.

## 2.2 <Functional Requirement One>

[The requirement description.]

## 3. Usability

[This section should include all of those requirements that affect usability. Examples follow:

- specify the required training time for a normal users and power users to become productive at particular operations
- specify measurable task times for typical tasks, or
- specify requirements to conform to common usability standards, for example, IBM's CUA standards or Microsoft's GUI standards]

### 3.1 <Usability Requirement One>

The requirement description.

- certain parts of the functionality of the system).]

## 4. Design Constraints

Length maximums:

Application Name: 30 Characters

Application Name Description: 256 Characters

**Project:**  
Application Navigation/User  
Authentication

**Phase:**  
Inception

**Iteration:**  
N/A

Secured Object Name: 200 Characters  
Secured Object Description: 256 Characters  
(These are derived from the limits within the Application Security System.)

**4.1 <Design Constraint One>**

*[The requirement description.]*

**5. Online User Documentation and Help System Requirements**

*[Describes the requirements, if any, for on-line user documentation, help systems, help about notices, etc.]*

ECARS 2.0 Callbacks

ECARS 2.0 Callbacks

File Edit View Help

Use cases

Name	Size	Type	Modified
Callback Summary Use case	117KB	Microsoft Word Document	12/20/01 12:23 PM
Generate Callback Use case	142KB	Microsoft Word Document	12/20/01 12:31 PM
RMS Callback Summary Use case	82KB	Microsoft Word Document	12/20/01 12:33 PM

3 object(s) 340KB

601  
602  
603

0 object(s) selected



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# Enterprise Rent-A-Car

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## Rental Redesign/ECARS 2.0 Business Use-Case Specification: Callback Summary

Version 1.7

	Version: <1.0>
Rental Redesign/ECARS 2	Date: <dd/mmm/yy>
<document identifier>	

## Revision History

Date	Version	Description	Author
01/02/2001	1.0	Started Callback Summary Use Case Document	Douglas Newton
01/03/2001	1.1	Added flows related to back/next and update message status controls.	Mike Meusey
01/04/2001	1.2	Added special conditions and issues to consolidate requirements from all other callback summary specs	Mike Meusey
01/05/2001	1.3	Added sequence diagrams	Mike Meusey
03/20/2001	1.4	Changed format to match with the standard. Added some missing flows from Functional specification.	Santhosh kumar
04/11/2001	1.5	Minor changes to flows. Added links. Formatting changes	Allison Bruhn
04/17/2001	1.6	Minor changes to flows. Took out referrals to panels to reflect more along the lines of the business functionality	Allison Bruhn
04/27/2001	1.7	Changes based on User Review. Altered table in 2.1.2 to make more understandable; added sentence about security in sections where the user is viewing contracts and then either has the authorization to only view or actually perform a callback; added an alternate flow for Search Callback; changed ALL option to ALL Contacts option; added in special requirements that the Number of Days Outstanding reason would be first rather than name (confirming); still need to make the bullets within Shop, Bill-To, and Renter consistent	Allison Bruhn
06/07/2001	1.8	Change Special Requirement to Clarify the sorting order for Customer List and Contact. <b>Original Text:</b> The customer list should be sorted alphabetically by the contact's last name and then first name, with the following exceptions. <b>Change To:</b> The customer list should be sorted alphabetically. Contact list is sort by last name and then first name, with the following exceptions	Pin Koh

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9/20/01	1.9	Removed Number of Days Outstanding from the special req. stating where it was to appear. Removed Contract Status from the Ticket Table.	L. Moellman
10/11/01	2.0	Added Print List flow.	L. Moellman

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## Business Use-Case Specification: Callback Summary

### 1. Callback Summary

#### 1.1 Brief Description

The purpose of this use case is to show what a user (a branch employee, call center) does to view a branch or group's list of callbacks needing to be performed for a given day. The user can select to view callbacks by a selected callback method whereby certain callback types are associated.

### 2. Flow of Events

#### 2.1 Basic Workflow

##### 2.1.1 Use Case Begins

This use case begins when a user chooses to view callbacks needing to be performed for a given day. The system retrieves all incomplete callbacks for the default group and branch (the default is the group and branch where the user logged in). If the user chooses to view callbacks for another branch within the group, see alternate flow view different branch. If the user chooses to view callbacks for an entire group, see alternate flow view different group. If the system does not retrieve any callbacks, see alternate flow no callbacks retrieved.

##### 2.1.2 Callback Method and Type Information

The user has the option to select a callback method and callback type associated with the selected method. The callback methods and callback types available to the user are highlighted in the table below:

<u>Callback Method</u>	<u>Callback Types Associate with the Method</u>
Manual Callback	<p>There are three types of callbacks associated to a Manual Callback. The user is able to select which type of callback to perform. The three types are listed below:</p> <ul style="list-style-type: none"> <li>• Shop</li> <li>• Bill-To</li> <li>• Renter</li> <li>•</li> </ul>
Automated, Fax, and Consolidated Callback	<ul style="list-style-type: none"> <li>• The two types of callbacks associated with the Automated, Fax, and Consolidated Callbacks are:</li> <li>•</li> <li>• Shop</li> <li>• Bill-To</li> <li>•</li> </ul>
Manual Shop	<ul style="list-style-type: none"> <li>• Upon entry to the Summary, Manual Shop callback</li> </ul>

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Callback	appears as the default. The user can either choose to look at these callbacks or navigate to a different callback method and type.
----------	--

### 2.1.3 Callback Summary

The system also displays a main callback summary that contains information corresponding to the previously selected callback method and types.

### 2.1.4 Shop Callback

The user selects the Manual/Automated/Fax/Consolidated Shop callback option. The system displays a list of shop accounts assigned to contracts having incomplete callbacks. For each shop, the following information will be displayed:

- Shop account name
- Telephone number
- Number of calls
- Number of left messages
- Customer number
- Customer address

The user has the option to print this list see alternate flow Print List.

If the user chooses to select the Manual/Automated/Fax/Consolidate Bill-To see alternate flow bill-to callback. If the user chooses to select the Renter callback option, see alternate flow renter callback.

### 2.1.5 Selecting A Shop Customer

The user selects a shop customer from the list. Only one shop customer may be selected at a time. The system displays a list of contacts associated with the selected shop customer in the main callback summary and the following information is displayed:

- Contact Name
- Contact Phone Number
- Number of Calls
- Number of Left Messages

If the user chooses the ALL option see alternate flow ALL Contacts option.

### 2.1.6 List of contracts displayed

The system displays a list of contracts associated with the selected shop customer in the main callback summary. For each contact, the following information will be displayed:

- Number of days callback has been outstanding
- Renter name
- Description of renter's vehicle
- Claim number, policy number, RO number, PO number
- Date of loss
- Primary callback reason
- Today's action of callback

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- Contract number

The user will either have the authority to view only or actually perform a callback at this point (TBD).

2.1.7 The user selects to exit the callback summary and the use case ends.

## 2.2 Alternative Workflows

### 2.2.1 Bill-To callback

The user selects the Manual/Automated/Fax/Consolidated Bill-To callback option. The system displays a list of bill-to customers assigned to contracts having incomplete callbacks .

#### 2.2.2 Selecting a bill-to

The user selects a bill-to customer from the list. Only one bill-to may be selected at a time. The system displays a list of contacts associated with the selected shop customer in the main callback summary and the following information is displayed:

- Contact Name
- Contact Phone Number
- Number of Calls
- Number of Left Messages

The user has the option to print this list see alternate flow Print List.

If the user chooses the ALL option see alternate flow ALL Contacts option.

#### 2.2.3 List of contracts displayed

The system displays a list of contracts associated with the selected bill-to customer in the main callback summary. For each contract, the following information will be displayed:

- Number of days callback has been outstanding
- Renter name
- Description of Renter's Vehicle
- Primary callback reason
- Claim number, policy number, PO number, RO number
- Date of Loss
- Today's action on callback
- Contract Number

The user will either have the authority to view only or actually perform a callback at this point (TBD).

#### 2.2.4 Renter callback

The user selects the Renter callback option .

#### 2.2.5 List of contracts displayed

The system displays a list of the renters assigned to contracts that have incomplete callbacks. For each contract, the following information is displayed:

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- Number of days the callback has been outstanding
- Renter name
- Current amount due (balance due as of estimated return date)
- Payment type
- Renter's home phone number
- Primary callback reason
- Contract Number
- Today's action on last callback

The user has the option to print this list, see alternate flow Print List.

The user will either have the authority to view only or actually perform a callback at this point (TBD).

#### 2.2.6 View different branch

The user chooses to view callbacks for another branch within the group .

#### 2.2.7 View Different Group

The user chooses to view callbacks for a different group .

#### 2.2.8 No Callbacks Retrieved

The system does not retrieve any callbacks for a given group branch. The user can choose to view callbacks at another group branch or chooses to exit the summary and the use case ends.

#### 2.2.9 ALL Contacts Option

The user selects ALL in regards to the contacts for the selected customer. The following information will display:

- The contact name will be ALL
- The contact phone number will be the same as the customer's
- The number of calls and messages will be the sum of the values for all the customer's other contacts

#### 2.2.10 Print List

- The user has the option to print the list they are viewing .
- The user chooses to print and the use case continues at basic flow .

#### 2.2.11 UNKNOWN contact

The user selects UNKNOWN in regards to the contacts for the selected customer. The following information will display:

- The contact phone number will be the same as the customer's

#### 2.2.12 Perform callback

If the user selects to perform a callback, see Shop/Bill-To/Renter perform callback use case according to the current selection of the callback type .

#### 2.2.13 Search for a callback

If the user selects to search for a callback, see Shop/Bill-To/Renter search callback use case according to the current selection of the callback type.



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2.2.14 The user chooses to exit the callback summary and the use case ends.

### 3. **Special Requirements**

3.1 Alphabetically sorted

The customer list should be sorted alphabetically.

Contact list is sort by last name and then first name, with the following exceptions:

- The ALL selection should appear first in the list
- The UNKNOWN contact, if present, should appear after the ALL

3.2 Title Bar

The title bar displays the callback method and the callback type selected on the navigation bar. When the callback summary initially comes up, the default setting is "manual callbacks – shop".

3.3 Callback Center

When the requesting terminal is from a Callback Center, those callbacks that are consolidated to the particular Center should be grouped to the appropriate callback type under the "manual" callback method.

3.4 Consolidated Callbacks

Additional data field is shown for the Group and Branch to which the callback is consolidated.

### 4. **Pre-Conditions**

4.1 The user has logged in and has callback summary view privilege.

### 5. **Extension Points**

5.1 <name of extension point>

### 6. **FAQ's**

### 7. **To Be Determined**

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**Enterprise Rent-a-Car®**

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**Rental Redesign/ECARS 2.0**

**Business Use-Case Specification: Generate Callback  
List**

**Version 3.2**

Project:	Version: <3.2>
Rental Redesign/ECARS 2	Date: 12/20/01 12:31 PM
Generate Callback Use case	

## Revision History

Date	Version	Description	Author
05/10/2000	1.0	Initial creation of form.	David Beebe
05/18/2000	1.1	1 <sup>st</sup> Revision-Initial Use Case entered	Johnny S. Johnston
06/09/2000	1.2	2 <sup>nd</sup> Revision-Initial Use Case updates	Johnny S. Johnston
06/23/2000	1.3	3 <sup>rd</sup> Revision-Copied Initial Use Case into Rational's Use Case format.	Stephanie Schiwinger
07/14/2000	2.0	4 <sup>th</sup> Revision-Update for first user review feedback.	Johnny S. Johnston
08/29/2000	2.1	5 <sup>th</sup> Revision-Update for resolution of action items.	Johnny S. Johnston
09/06/2000	2.2	6 <sup>th</sup> Revision-Update based on Jeff Roderick's review	Allison Bruhn
09/14/2000	2.3	7 <sup>th</sup> Revision-Update for final business design meeting	Johnny S. Johnston
10/3/2000	2.4	8 <sup>th</sup> Revision-Added appendix detailing out the generation logic examples and clarified logic on the day a callback should be generated.	Mike Pallia
03/13/01	3.0	9 <sup>th</sup> Revision-Changed the use case to match the standard format. Removed some steps which is irrelevant to this use case.	Santhosh Kumar
04/18/2001	3.1	10 <sup>th</sup> Revision-Formatting changes to be consistent with other use cases.	Allison Bruhn
05/02/2001	3.2	11 <sup>th</sup> Revision-Added alternate flow addressing the Shop being the Bill-To; Changed wording and structure in main flow (put more detail in 2.1.1); reformatted alternate flows and special requirements to read a little easier by taking out italics and extra quotation marks;	Allison Bruhn
5/25/2001	4.0	12 <sup>th</sup> Revision-Change generation criteria from using batch to event trigger	Pin Koh
8/14/2001	4.1	13 <sup>th</sup> Revision- Changed wording on 2.1.2 and 2.2.3 per meeting w/Jon and Mary	Leah Moellman
10/04/2001	4.2	14 <sup>th</sup> Revision- Remarked Special Req. Also updated RMS Callback Flow to current requirements.	Leah Moellman

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## Use Case Specification: Generate Callback List

### 1. Generate Callback List

#### 1.1 Brief Description

This use case will show what the system does to generate callbacks that result from newly created or updated contract information into the Rental GUI.

### 2. Flow of Events

#### 2.1 Basic Workflow

##### 2.1.1 *Use Case Begins*

This use case begins when the system generates callbacks based on reasons when rental records are **created** or **changed**. The types of callbacks that may be generated include Shop, Bill-To, and Renter. Since in the callback summary use case, the main flow is Shop callback, this use case will stay consistent with that. If the system generates a Bill-To callback see alternate flow Generate Bill-To. If the system generates a Renter callback see alternate flow Generate Renter. If the Shop is also the only Bill-To on the contract, see alternate flow Shop Is The Bill-To. If the contract status is "void" see alternate flow Contract Status is Void.

##### 2.1.2 Generate Shop Callbacks

A shop callback is generated with the reason to "Obtain Repair Status" if the following conditions below exists:

- Estimated completion date is not null and the contract status is open.  
**OR**
- Bill-to extension date is not empty and the contract status is open.  
Callback date is the earlier of estimated completion date and bill-to extension date

##### 2.1.3 *The use case ends.*

#### 2.2 Alternative Workflows

##### 2.2.1 Generate Bill-To Callbacks

A bill-to callback can be generated based on two reasons. The reasons are obtain initial authorization and obtain authorization extension. If the conditions within each reason exist, a bill-to callback will be generated:

##### 2.2.1.1 Reason One-Obtain Initial Authorization

- The bill-to authorization is pending or null and the contract status is reservation, open, or close-pended.  
**OR**
- The bill-to extension date is null or blank and the contract status is reservation, open, or close-pended

Callback date is the date when bill-to is created or changed.

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#### 2.2.1.2 Reason Two-Obtain Authorization Extension

- Bill-To authorization status is Authorized, Bill-To extension date is not null  
AND
- The contract status is open or close-pended.  
Callback date is the extension date.

#### 2.2.2 Generate Renter Callbacks

A renter callback can be generated based on five reasons. The reasons are last day notification, balance due, past estimated return date, ticket re-write, or maximum authorized amount reached. If the conditions within any of the reasons exist, a renter callback will be generated:

##### 2.2.2.1 Reason One-Last Day Notification

- If a value has been entered into the Bill-To last day date and the contract status is open  
AND
- Renter has not been contacted about this last day date.  
Callback date is last day date

##### 2.2.2.2 Reason Two-Balance Due

- If the renter balance due amount is greater than any/all deposits plus credit card authorizations  
AND
- the contract status is open or close-pended.  
Callback date is 1 day before the date when renter has a balance due.

##### 2.2.2.3 Reason Three-Past Estimated Return Date

- If contract status is open.  
Callback date is estimated return date.

##### 2.2.2.4 Reason Four-Ticket Rewrite

- (If the estimated return date minus the contract open date is between 27 and 30 days  
AND
- The renter has not been notified for rewrite  
AND
- the contract status is open.)
- OR
- (If the estimated return date minus the contract open date is greater than or equal to 31 days  
AND

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- The contract status is open.)  
Callback date is estimated return date.

#### 2.2.2.5 Reason Five-Maximum Authorized Amount Reached

- If the estimated charges for the Bill-To portion has reached the maximum amount that the Bill-to authorized  
**AND**
- The contract status is open.  
Callback date is date when estimated charges exceeds bill-to authorized amount.

#### 2.2.3 Shop Is The Bill-To

If the shop is also the only bill-to on a contract, a shop callback and bill-to callback is generated.

#### 2.2.4 Contract Status is Void

The system deletes all callback records for this reservation and the use case ends.

### 3. Special Requirements

#### 3.1 Balance Due Threshold

The value in this field will be used to determine the maximum dollar amount a renter can owe before triggering a callback. Each group branch will be able to set the value placed into this field for the balance due callback reason only. Initially this value will be set to \$1 for the balance due callback reason for all branches

#### 3.2 Monday Slide Threshold

This threshold acts as a weekend slide but will be set up for every day of the week. The value in the threshold indicates the number of days later (a positive number) or earlier (a negative number) the callback should be generated. Each branch will be able to set this value for all the callback reasons. Initially this value will be set to:

- -3 days=for balance due and maximum authorized amount callback reasons
- 0 days=for all other callback reasons

#### 3.3 Tuesday Slide through Saturday Slide Thresholds

These will all behave the same way as the Monday Slide. Each branch will be able to set this value for all callback reasons. Initially this value will be set to 0 days.

#### 3.4 Sunday Slide Threshold

Same as the Monday Slide. Each branch will be able to set this value for all callback reasons. Initially this value will be set to:

- -2 days=for balance due and maximum authorized amount callback reasons
- 0 days=for all other callback reasons



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### 3.5 Holiday Slide Threshold

- If a callback would be generated on holiday, then the system will look to the value in this threshold to determine how many days earlier (a negative number) or later (a positive number) the callback should be generated:
- -1=for all callback reasons

### 3.6 When to Generate Threshold

- This field will tell the system how many days before a generation criteria is true to generate the callback. Each branch will be able to set this value for each callback reason. Initially this value will be set to:
- 1 day=For balance due and maximum authorized amount callback reasons
- 0 days=for all other callback reasons

### 3.7 Contract Status Threshold

- This field indicates the valid statuses of rental contract for a callback reason. Each branch will be able to set this value for each callback reason. Initially this value will be set to:
- Reservation, Open, Close-Pend=for initial authorization
- Open and Close-Pend=for authorization extension and balance due callback reason
- Open=for all other callback reasons

### 3.8 Rewrite Max Days Threshold

This field will tell the system the maximum number of days a contract can be opened before a rewrite is necessary. Each branch will be able to set this value for a callback reason of ticket rewrite only. Initially this value will be set to 30 days for the ticket rewrite callback reason for all branches.

### 3.9 Rewrite Minimum Days Threshold

This field will tell the system the number of days before the maximum is reached that a callback reason of ticket rewrite should be generated. Each branch will be able to set this value for a callback reason of ticket rewrite only. Initially this value will be set to 3 days for the ticket rewrite callback reason for all branches

### 3.10 ARMS Callback

The system reads the ARMS legacy database ARMSPR1, using the ARMS customer profile ID associated as Bill-To/Shop . The Bill-to profile ID always overrides Shop profile ID. The system checks the field value for 'P1YN21' is populated as 'Y'. If it is 'Y', generate the Shop and Bill-To callbacks one day before the branch generation criteria would generate it.

### 3.11 RMS Callback

A RMS callback is generated based on the **Callback Date** .

- The initial **Callback Date** is determined by the Bill To Account Number and branch number, which is stored in the Days to Call file.
- The second **Callback Date** is driven manually by the user for all additional calls that are made to the body shop.

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The system checks in the legacy database CB032P for the **callback date**.  
If the **callback date** is not found, the system checks the CB030P file for Days to  
call, for the Bill-To Account Number.

### 3.12 Callback Methods

By default all callbacks are assigned with Manual method. Below is the rule that  
is applicable for Shop and Bill-To callbacks:

- Manual (default method)
- Electronic
- Fax
- Consolidated

## 4. **Pre-Conditions**

### 4.1.1 *First Pre-Condition*

## 5. **Extension Points**

### 5.1 **First extension point**

## 6. **FAQ's**

# **Rental Redesign/ECARS 2.0**

## **Use Case Specification: RMS Callback Summary**

**Version <1.0>**  
**Draft**

## Revision History

Date	Version	Description	Author
<dd/mm/yy>	<x.x>	<details>	<name>
9/28/01	1.0	Initial Draft	Leah Moellman
10/3/01	1.1	Updates from internal review	Leah Moellman
10/10/01	1.2	Updates from user review	Leah Moellman
10/11/01	1.3	Entered into ReqPro an marked requirements	Leah Moellman

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# Use Case Specification: RMS Callback Summary

## 1. RMS Callback Summary

### 1.1 Brief Description

This use case will describe how a user interacts with a system to view a branch or group's list of RMS callbacks needing to be performed for a given day.

## 2. Flow of Events

### 2.1 Basic Flow

2.1.1 The use case begins when the user chooses to view RMS callbacks from the summary screen, needing to be performed for a given day.

2.1.2 The system retrieves all incomplete RMS callbacks for the default group and branch (the default is the group and branch where the user logged in). Note: A user may also view callbacks from various groups and branches depending on authority.

2.1.3 The user has the option to view RMS callbacks by:

- Direct Bill (Y) Tickets only (Body shop calls only)
- Direct Bill (Y) Tickets only (ARMS Auto Body Shop Calls only)
- Direct Bill (N) Tickets only (Authorizations needed)
- Direct Bill (N) Reservation only (Authorizations needed)

2.1.4 For the basic flow, the user selects to view Direct Bill (Y) Tickets only (Body shop calls only).

2.1.5 The user selects which RMS account they wish to view .

2.1.6 The system displays a list of shop accounts assigned to contracts or reservations that have incomplete RMS callbacks . For each shop, the following information will be displayed:

- Shop account name
- Telephone number
- Number of calls
- Number of left messages
- Account Number
- Account Address

2.1.7 The user selects a shop account from the list.

2.1.8 The system displays a list of contacts associated with the selected shop account:

- Contact Name
- Contact Phone Number
- Number of calls
- Number of left messages
- Update message status

2.1.9 The user selects a contact and the system displays a list of contracts associated with the selected account number in the main callback summary . For each contract, the following information will be displayed:

- Number of days callback has been outstanding
- Renter Name

- Description of renter's vehicle
- Claim Number. Policy Number. RO Number. PO Number
- Date of loss
- Contract status
- Primary callback reason
- Today's action of callback
- Contract Number

2.1.10 The user selects from the list of contracts and the use case ends .

## 2.2 Alternative Flows

### 2.3 Direct Bill (Y) Tickets only (ARMS Auto body shop calls) \_\_\_\_\_

2.3.1 The user selects to view Direct Bill (Y) Tickets only (ARMS Auto body shop calls).

2.3.2 The user selects which RMS account they wish to view .

2.3.3 The system displays a list of shop accounts assigned to contracts or reservations that have incomplete RMS callbacks . For each account, the following information will be displayed:

- Shop account name
- Telephone number
- Number of calls
- Number of left messages
- Account Number
- Account Address

2.3.4 The user selects a Shop account from the list.

2.3.5 The system displays a list of contacts associated with the selected Shop account:

- Contact Name
- Contact Phone Number
- Number of calls
- Number of left messages
- Update Message Status

2.3.6 The user selects a contact and the system displays a list of contracts associated with the selected account number in the main callback summary . For each contract, the following information will be displayed:

- Number of days callback has been outstanding
- Renter Name
- Description of renter's vehicle
- Claim Number. Policy Number. RO Number. PO Number
- Date of loss
- Contract status
- Primary callback reason
- Today's action of callback
- Contract Number

2.3.7 The user selects from the list of contracts and the use case ends.

## **2.4 Direct Bill (N) Tickets only (Authorization Needed)**

2.4.1 The user selects to view Direct Bill (N) Tickets only (Authorizations needed).

2.4.2 The system displays a list of Bill To accounts assigned to contracts or reservations that have incomplete RMS callbacks . For each account, the following information will be displayed:

- Bill To account name
- Telephone number
- Number of calls
- Number of left messages
- Account Number
- Account Address

2.4.3 The user selects a Bill To account from the list.

2.4.4 The system displays a list of contacts associated with the selected Bill To account :

- Contact Name
- Contact Phone Number
- Number of calls
- Number of left messages
- Update Message status

2.4.5 The user selects a contact and the system displays a list of contracts associated with the selected account number in the main callback summary . For each contract, the following information will be displayed:

- Number of days callback has been outstanding
- Renter Name
- Description of renter's vehicle
- Claim Number, Policy Number, RO Number, PO Number
- Date of loss
- Contract status
- Primary callback reason
- Today's action of callback
- Contract Number

2.4.6 The user selects from the list of contracts and the use case ends.

## **2.5 Direct Bill (N) Reservation Only (Authorization Needed)**

2.5.1 The user selects to view Direct Bill (N) Reservation Only (Authorization Needed).

2.5.2 The system displays a list of Bill To accounts assigned to contracts or reservations that have incomplete RMS callbacks . For each account, the following information will be displayed:

- Bill To account name
- Telephone number
- Number of calls
- Number of left messages
- Account Number
- Account Address



2.5.3 The user selects a Bill To account from the list.

2.5.4 The system displays a list of contacts associated with the selected Bill To account:

- Contact Name
- Contact Phone Number
- Number of calls
- Number of left messages
- Update Message Status

2.5.5 The user selects a contact and the system displays a list of contracts associated with the selected account number in the main callback summary . For each contract, the following information will be displayed:

- Number of days callback has been outstanding
- Renter Name
- Description of renter's vehicle
- Claim Number, Policy Number, RO Number, PO Number
- Date of loss
- Contract status
- Primary callback reason
- Today's action of callback
- Contract Number \_\_\_\_\_

2.5.6 The user selects from the list of contracts and the use case ends .

### **3. Special Requirements**

#### **General Rule Sets**

1. An unauthorized user will have limited access to RMS callbacks.
2. RMS callbacks are sorted by account by body shop.
3. Reservations should not display after 30 days .
4. A bill to Account Number and GPBR Number identifies RMS callbacks .
5. Closed contracts should not display .
6. Must have the ability to sort calls by bill to "Y" and "N" for both reservations and open tickets.
7. Must display whether the contract is ARMS and authorized (direct bill "Y" or "N").
8. Within the customer profile, RMS calls must be consolidated by group(s) to a particular branch. The consolidated groups and branch must be easily identified and displayed.
9. An open ticket or reservation must have a bill-to account number (entered in the customer profile) with adjustor callbacks selected, for it to be considered a RMS callback.

#### **4. International Requirements**

•

#### **5. Pre-Conditions**

- A user has successfully logged onto the computer.

- User is an authorized RMS user.
- Callback is an RMS Callback.

## 6. Post-Conditions

## 7. Extension Points

## 8. Questions

1. Does **callback date** need to be on summary or just perform?
2. Does there need to be the ability to just select by Direct Bill (Y) etc. or do they need to be sorted by this criteria?
3. Does the RMS user do the renter calls or is this the branch responsibility?
- 4.

[illegible]

2CHS 2.0 Callbacks

Supplemental Specs

Name	Size	Type	Modified
Callback Scenarios	184KB	Microsoft Word Document	12/20/01 12:34 PM
Callback Summary Print	162KB	Microsoft Word Document	12/20/01 12:36 PM
Callback Supplementary Spec	207KB	Microsoft Word Document	12/20/01 12:37 PM
Screen Action Spec - Callback Summary	335KB	Microsoft Word Document	12/20/01 12:42 PM

4 object(s) 886KB

S01  
S02  
S03  
S04

01(s) selected



**Project:**  
Callback

**Phase:**  
Elaboration

**Iteration:**  
N/A

# Callback Automatic Callback Generation Scenarios

Version 1.0

**Artifact:**  
Automatic Callback Generation Scenarios

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1 of 22

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## 1. Introduction

This document details the scenarios in which a callback gets automatically generated. It is supplemental information to the Generate Callback Use Case.

### General Information

- Within this document the callback date is defined as the date to perform the callback and is determined differently by each rule.
- Callbacks will never be generated for a past date. The minimum date that a callback can occur is the current date.

#### 1.1 Purpose

The purpose of this document is foster the communication between the business users and the Callbacks team. It is to be used to put specific examples to items in the use case to enhance the clarity of the business rules.

#### 1.2 Scope

This document supports the Generate Callback Use Case.

#### 1.3 References

Generate Callback Use Case

#### 1.4 Overview

The main content of this document documents in detail the business rule that governs the life cycle of all callbacks. It describes the conditions, actions and results that affect callbacks.

Version: <1.0>	
Callback	Date: <dd/mm/yy>
<document identifier>	

## 2. Shop Callbacks

### 2.1 Obtain Repair Status

#### 2.1.1 Rental Contract Status

The rental contract status must be:

- Open

#### 2.1.2 Scenarios

Scenario	Callback and Status at event of Scenario	Action
The user enters a new Shop for a new or existing rental. The Estimated Completion date is optional.	No Obtain Repair Status callback exists for this new shop	Create an Obtain Repair Status callback, based on the Estimated Completion Date or Bill-To Extension date, with incomplete status
The user retrieves a rental contract. The user then changes the Estimated Completion Date or Bill-To Extension Date to a valid date.	An incomplete Obtain Repair Status callback exists.	Complete the existing Obtain Repair Status callback And Create an Obtain Repair Status callback, based on the Estimated Completion Date or Bill-To Extension date, with incomplete status
The user is informed that another Shop will do repairs on the renter's car. The user then retrieves a rental contract and changes the shop account on an existing contract.	An incomplete Obtain Repair Status callback exists.	Remove the existing Obtain Repair Status callback for the original Shop account And Create a new Obtain Repair Status callback, for the new Shop account based on the Estimated Completion Date or Bill-To Extension date, with incomplete status

Version: <1.0> Date: <dd/mm/yy>	
Callback	
<document identifier>	

The user retrieves a rental contract and makes changes that do not satisfy the callback generation criteria for the Obtain Repair Status callback. E.g. Close open ticket ('Open' to 'CLOSED/Pending'), Remove the Shop account.	An incomplete Obtain Repair Status callback exists.	Remove the incomplete Obtain Repair Status callback
---	---	---

### 2.1.3 Callback Date for Obtain Repair Status

Callback Action	Callback Date
Create, Update	<ul style="list-style-type: none"> <li>The callback date is the Estimated Completion Date or the Bill-To Extension Date which ever is earlier.</li> <li>If either the Estimated Completion Date or the Bill-To Extension Date is empty, the callback date is the field that contains a valid date.</li> <li>If both the Estimated Completion Date and the Bill-To Extension Date is empty, the callback date is the current date.</li> <li>If the callback date (as determined from above) is less than the current date, use current date.</li> </ul>

### 2.1.4 Completion Criteria

The callback is complete when:

- The estimated repair date or the bill-to extension date has changed.

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Version: <1.0>	
Date: <dd/mm/yy>	
Callback	
<document identifier>	

### 3. Bill-To Callbacks

#### 3.1 Obtain Initial Authorization

THIS ALSO APPLIES TO RMS CALLBACKS FOR DIRECT BILL (N) CUSTOMERS.

##### 3.1.1 Rental Contract Status

The rental contract status must be:

- Reservation/open
- Open
- Open/pre-write or
- CLOSE/Pending

#### 3.1.2 Scenarios

Scenario	Callback and Status at event of Scenario	Action
The user enters a new Bill-To for a rental contract with Authorization Status as 'Pending' or 'Authorized' without an extension date	No Obtain Initial Authorization callback exists for this new Bill-To.	Create an Obtain Initial Authorization callback with incomplete status
The user retrieves a rental contract and change the authorization status of an existing Bill-To from an 'Authorized' status with a valid Extension Date, Reimbursed, Terminated, or Declined, to 'Pending' or 'Authorized' without an extension date.	No Obtain Initial Authorization callback exists for this existing Bill-To.	Create an Obtain Initial Authorization callback with incomplete status
The user retrieves a rental contract and changes the authorization status of an existing Bill-To from a 'Pending' status to an 'Authorized' status with a valid extension date	An incomplete Obtain Initial Authorization callback exists.	Completes the existing Obtain Initial Authorization callback.

Version: <1.0> Date: <dd/mm/yy>	
Callback	
<document identifier>	

<p>The user retrieves a rental contract and makes changes that does not satisfy Obtain Initial Authorization callback generation criteria</p> <p>E.g.</p> <ol style="list-style-type: none"> <li>1. Set the Authorization Status to Reimbursed, Terminated, or Declined,</li> <li>2. Void a reservation.</li> <li>3. Close open ticket ('CLOSE/Pending' to 'CLOSED'), or</li> <li>4. Remove a Bill-To</li> </ol>	An incomplete Obtain Initial Authorization callback exists.	Remove incomplete Obtain Initial Authorization callback

### 3.1.3 Callback Date for Obtain Initial Authorization

Callback Action	Callback Date
Create	Current Date

### 3.1.4 Completion Criteria

The callback is complete when:

- The user enters a status of authorized with a valid extension date.

Version: <1.0>	
Callback	Date: <dd/mm/yy>
<document identifier>	

### 3.2 Obtain Authorization Extension

THIS DOES NOT APPLY TO RMS.

#### 3.2.1 Rental Contract Status

The rental contract status must be:

- Open
- Open/pre-write or
- Close/pending status.

#### 3.2.2 Scenarios

Scenario	Callback and Status at event of Scenario	Action
The user enters a New Bill-To for a rental contract with given Authorization Status as 'Authorized' and a valid Extension date	No Obtain Authorization Extension callback exists for this new Bill-To.	Create an Obtain Authorization Extension callback, based on the Extension date, with incomplete status.  <b>*Note: An Obtain Initial Authorization will not be generated and completed.</b>
The user retrieves a rental contract and changes the authorization status of an existing Bill-To, possibly from 'Pending' to 'Authorized', and gives a valid Extension Date	No Obtain Authorization Extension callback exists for this existing Bill-To.	Create an Obtain Authorization Extension callback, based on the Extension date, with incomplete status  <b>*Note: If an Obtain Initial Authorization callback exists, the Obtain Initial Authorization callback will be completed.</b>
The user retrieves a rental contract and changes the extension date on an existing Bill-To, which is 'Authorized'.	An incomplete Obtain Authorization Extension callback for the previous extension date exists.	Completes the existing Obtain Authorization Extension callback and Create an Obtain Authorization Extension callback, based on the new Extension date, with incomplete status

Version: <1.0>	
Date: <dd/mm/yy>	
Callback	
<document identifier>	

<p>The user retrieves a rental contract and makes changes that does not satisfy the generation criteria for the Obtain Authorization Extension callback</p> <p>E.g.</p> <ol style="list-style-type: none"> <li>1. Close open ticket ('CLOSE/Pending' to 'CLOSED'),</li> <li>2. Change Bill-To authorization status from 'Authorized' to any other status, or</li> <li>3. Remove the Bill-To Extension Date</li> </ol>	<p>An incomplete Obtain Authorization Extension callback exists.</p>	<p>Remove incomplete Obtain Authorization Extension callback</p>
---	--	--

### 3.2.3 Callback Date for Obtain Authorization Extension

Callback Action	Callback Date
Create	Extension Date
Update	Extension Date

### 3.2.4 Completion Criteria

The callback is complete when:

- The user changes the authorized date for the bill-to.

Version: <1.0>	
Date: <dd/mm/yy>	
Callback	
<document identifier>	

#### 4. Renter Callbacks

##### 4.1 Last Day Notification

Last Day Notification callback is inserted when there is a Renter and the Last Day Date is a valid date. Every time the Last Day Date is changed, a new callback will be created if no incomplete Last Day Notification callback exists. Otherwise, the callback date will be updated if a callback exists with an incomplete status.

##### 4.1.1 Rental Contract Status

The rental contract status be:

- Open
- Open/pre-write

##### 4.1.2 Scenarios

Scenario	Callback and Status at event of Scenario	Action
The user enters a new rental contract and enters a valid last day date (in the future)	No Last Day Notification callback exists for this new Rental.	Create a Last Day Notification callback, based on the last day date, with an incomplete status
The user retrieves a rental contract and changes the last day date.	An incomplete Last Day Notification callback for the original last day date exists.	Update the existing callback date. Callback is still incomplete.
The user retrieves a rental contract and make changes that does not satisfy the generation criteria for the Last Day Notification callback E.g. 1. Change rental status to 'CLOSE/Pending', or 2. Remove the last day date	An incomplete Last Day Notification callback exists.	Remove incomplete Last Day Notification callback

##### 4.1.3 Callback Date

Callback Action	Callback Date
Create, Update	Last Day Date



Version: 1.0	
Callback	Date: <dd/mm/yy>
<document identifier>	

4.1.4 Completion Criteria

The callback is complete when:

1. The user calls the renter and decides to indicate that callback is complete.

Version: <1.0>	
Callback	Date: <dd/mm/yy>
<document identifier>	

## 4.2 Balance Due

### 4.2.1 Rental Contract Status

The rental contract status must be:

- Open
- Open/pre-write or
- Close pending

### 4.2.2 Scenarios

Scenario	Callback and Status at event of Scenario	Action
The user opens a new rental contract	No Balance Due callback exists for this new Renter.	If renter balance due amount is greater than 0 insert a Balance Due callback with incomplete status. Totalling the renter payments and the bill-to authorizations then subtracting this from the total charges determines the balance due.
The user retrieves a rental contract with an existing Renter and changes are made to either the Renter's payments, Bill-To authorization or any other information related to calculating renter balance due.	An incomplete Balance Due callback exist	If renter balance due amount is greater than 0 update the existing Balance Due callback's date. Totalling the renter payments and the bill-to authorizations then subtracting this from the total charges determines the balance due.
	No Balance Due callback exist for renter	If renter balance due amount is greater than 0 insert a Balance Due callback with incomplete status. Totalling the renter payments and the bill-to authorizations then subtracting this from the total charges determine the balance due. Incomplete
The user retrieves a rental contract and make changes that does not satisfy the generation criteria for a Balance Due callback	An incomplete Balance Due callback exists.	Remove incomplete Balance Due callback

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Version: 1.0	
Callback	Date: <dd/mm/yy>
<document identifier>	

E.g.	
1. Change rental status to 'CLOSE' or 2. Renter balance due amount is less than or equal to all deposits plus credit card authorization plus Bill-To authorization,	

#### 4.2.3 Callback Date

Callback Action	Callback Date
Create, Update	The date the balance due exceeds 0.

#### 4.2.4 Completion Criteria

The callback is complete when:

1. The user calls renter and indicate that callback is complete. The user decides.

Version: <1.0>	
Date: <dd/mm/yy>	
Callback	
<document identifier>	

### 4.3 Past Estimated Return Date

#### 4.3.1 Rental Contract Status

The rental contract status be:

- Open
- Open/pre-write

#### 4.3.2 Scenarios

Scenario	Callback and Status at event of Scenario	Action
The user opens a ticket and enters an estimated return date.	No Past Estimated Return Date callback exists for this new Renter.	Create a Past Estimated Return Date callback with an incomplete status
The user opens a ticket and does not enter an estimated return date.	No Past Estimated Return Date callback exists for this new Renter	Do not create a callback.
The user retrieves a rental contract and changes the estimated return date.	An incomplete Past Estimated Return Date callback for the original estimated return date exists.	Completes the existing Past Estimated Return Date callback and Creates a new Past Estimated Return Date callback with an incomplete status for the new estimated return date
The user retrieves a rental contract and makes changes that does not satisfy the generation criteria for the Past Estimated Return Date callback E.g. 1. Change rental status to 'CLOSE/Pending', or 2. Remove the estimated return date	An incomplete Past Estimated Return Date callback exists.	Remove the incomplete Past Estimated Return Date callback

#### 4.3.3 Callback Date

Callback Action	Callback Date
Create	Estimated Return Date

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Version: <1.0>	
Date: <dd/mm/yy>	
Callback	
<document identifier>	

Callback Action	Callback Date
Update	Estimated Return Date, if Estimated Return Date Changed

- 4.3.4 Completion Criteria
- The callback is complete when:
- Estimated Return Date changed.

Version: <1.0>	
Callbac	Date: <dd/mm/yy>
<document identifier>	

#### 4.4 Ticket Rewrite

##### 4.4.1 Rental Contract Status

The rental contract status must be:

- Open or
- Open/pre-write

##### 4.4.2 Scenarios

Scenario	Callback and Status at event of Scenario	Action
The user opens a ticket.	No Ticket Rewrite callback exists for this new ticket.	Create a Ticket Rewrite callback with incomplete status
The user retrieves a rental contract and changes the rental status to 'CLOSE/Pending' or 'CLOSE'.	An incomplete Ticket Rewrite callback exists.	Complete the Ticket Rewrite callback

##### 4.4.3 Callback Date

Callback Action	Callback Date
Create, Update	27 days after the ticket is opened.

##### 4.4.4 Completion Criteria

Estimated Return Date is changed

Version: <1.0>	
Date: <dd/mm/yy>	
Callback	
<document identifier>	

#### 4.5 Maximum Authorized Amount Reached

##### 4.5.1 Rental Contract Status

The rental contract status must be:

- Open or
- Open/pre-write

##### 4.5.2 Scenarios

Scenario	Callback and Status at event of Scenario	Action
The user opens a ticket with a new Bill-To	No Maximum Authorized Amount Reached callback exists for this new Renter.	Create a Maximum Authorized Amount Reached callback.
The user retrieves a rental contract with an existing Bill-To and changes information that determines estimated charges and Bill-To has not been notified of Maximum Authorized Amount Reached callback	An incomplete Maximum Authorized Amount Reached callback exists.	Completes the existing Maximum Authorized Amount callback and set Bill-To notified of Maximum Authorized Amount
The user retrieves a rental contract and make changes that does not satisfy to generate a Maximum Authorized Amount callback E.g. 1. Change rental status to 'CLOSE/Pending' or CLOSED, or 2. Void Bill-To	An incomplete Maximum Authorized Amount callback exists.	Remove incomplete Maximum Authorized Amount callback

##### 4.5.3 Callback Date

Callback Action	Callback Date
Create	(Date that estimated charges for Bill-To's authorized amount) minus 1 day
Update	(Date that estimated charges for Bill-To's authorized amount) minus 1 day

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Version: <1.0>	
Date: <dd/mm/yy>	
Callback	
<document identifier>	

#### 4.5.4 Completion Criteria

To be determined

### 5. RMS Callbacks

#### 5.1 Initial Shop Callback Date

The initial shop callback is based on one of two files from legacy. Based upon the RMS customer number, and the group/branch that has the callback, the system will look up in table \_\_\_\_\_ (from file CB030P) what the callback date should be. This table gives the system a number of days for the initial callback based on the customer number. If the callback date (based on CB030P) is later than the bill-to extension date, then it will be the extension date. If there is not an entry for the customer/group/branch combination, the callback date is immediate.

##### 5.1.1 Rental Contract Status

The rental contract status be:

- Open
- Open/pre-write

#### 5.1.2 Scenarios

Scenario	Callback and Status at event of Scenario	Action
A new rental contract is entered with an RMS Bill-To Account. The customer/group/branch data exists in table CB030P	No Initial RMS Shop callback exists	Create a Initial RMS Shop Callback based on the CB030P table
A new rental contract is entered with an RMS Bill-To Account. The customer/group/branch data does not exist in table CB030P	No Initial RMS Shop callback exists	Create a Initial RMS Shop Callback for today.
An existing rental contract, with an RMS Bill-To is modified so that the Bill-To is a different RMS Account	An incomplete Initial RMS Shop callback exists	Delete the Initial RMS Shop Callback and create a new one based on the CB030 table or for today.



Version: <1.0>	
Callback	Date: <dd/mm/yy>
<document identifier>	

The user retrieves a rental contract and makes changes that does not satisfy the generation criteria for the Initial Shop callback E.g. 1. Change rental status to 'CLOSE/Pending', or 2. Changes the Bill-To information such that the Bill-To is not an RMS customer.	An incomplete RMS Shop callback exists.	Remove incomplete RMS Shop Callback

### 5.1.3 Callback Date

Callback Action	Callback Date
Create	<ul style="list-style-type: none"> <li>If no data exists for the RMS account in CB030P table, then the callback date is the current date.</li> <li>If data exists in the CB030P table, then the callback date is the Bill-To extension date or the date generated by CB030P, whichever is earlier.</li> </ul>

### 5.1.4 Completion Criteria

The callback is complete when:

1. The user calls the body shop and decides to indicate that callback is complete.

### 5.2 Subsequent Shop Callback Date

The subsequent RMS Shop Callback Dates are based upon the user entry while they are performing the previous callback and the bill-to extension date. This will be covered in more detail in the Perform Callback portion of the project.

#### 5.2.1 Rental Contract Status

The rental contract status be:

- Open

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Version: 1.0	
Callback	Date: <dd/mm/yy>
<document identifier>	

## 5.2.2 Scenarios

Scenario	Callback and Status at event of Scenario	Action
The user performs an RMS Shop callback and enters a date for the next callback to be performed		Create a subsequent callback based on the user-entered date or bill-to extension date.
The user retrieves a rental contract and makes changes that does not satisfy the generation criteria for the Initial Shop callback E.g. 3. Change rental status to 'CLOSE/Pending', or 4. Changes the Bill-To information such that the Bill-To is not an RMS customer.	An incomplete RMS Shop callback exists.	Remove incomplete RMS Shop Callback

## 5.2.3 Callback Date

Callback Action	Callback Date
Create	The callback date will be either the date the user entered or the bill-to extension date whichever is earlier.

## 5.2.4 Completion Criteria

The callback is complete when:

1. The user calls the body shop and decides to indicate that callback is complete.

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ECARS 2.0	Date: 12/21/01
Callback Summary Print	

**ECARS 2.0**  
**Supplementary Specifications: Callback Summary**  
**Print**

**Version 1.2**

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	Version: 1.2
ECARS 2.0	Date: 12/21/01
Callback Summary Print	

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Date	Version	Description	Author
November 6, 2001	1.0	Creation	Leanne Waugh
November 8, 2001	1.1	Updates based on feedback from Jon and Mary	Leanne Waugh
November 29, 2001	1.2	Updated based on new print method of having the user select which report to print via a pop-up.	Leanne Waugh

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ECARS 2.0	Date: 12/21/01
Callback Summary Print	

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Callback Summary Print	

## Supplementary Specification

### 1. Introduction

This document details the print requirements for the Callback Summary screens. It is inclusive of all methods of callbacks including: Manual, Automated, Fax and RMS. It is also inclusive of the types of callbacks including: Shop, Bill-To and Renter.

### 2. Print Dialog Box

When the user selects to print, the system will display the Internet Explorer standard print dialog box. This dialog box does not have any Hot Keys and the OK button is the default button.

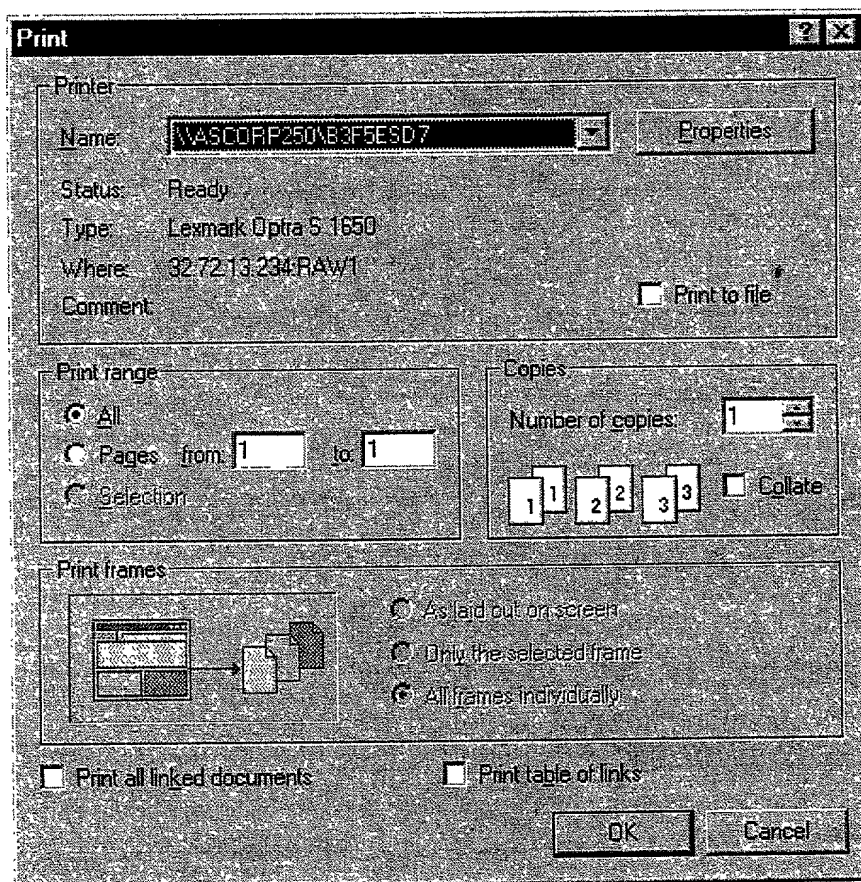


Figure 1: Standard Internet Explorer Print Dialog

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### 3. Callback Summary Screen

As specified in the Callback Summary Screen Action Specification, the user will have the opportunity to print at any time. If there is more than one table that could potentially be printed, the system will provide the user with a pop-up to select the report to be printed.

The data that the user is looking at will determine what information is printed. For example, if the user is viewing Manual, Bill-To callbacks for Group/Branch 0101, presses the Print List button and selects to print the Account list on the Callback Summary Print Dialog, then the system will print the 'Account List' for Manual, Bill-To callbacks for 0101 in the format specified below .

There are four different types of tables that the user might print – Account, Contact, Contract and Renter. Each of these tables corresponds to a different report.

All of the printed reports will follow the standard report standards including column justification, font style and size.

To meet American and European requirements, reports must be able to be printed on A4 and 8 ½ by 11 sized paper.

All report data will be sorted alphabetically according to the left most field on the report. In the situations where a person's name is the left most field, the data will be sorted by last name.

The report header data, including the column headers will be repeated at the top of every page.

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### 3.1 Account List

This report prints the following pieces of data for the selected Callback method, type, group and branch:

- Name
- Phone Number
- Number of Calls
- Left Messages
- Account Number
- Address

This report will include a header that informs the user of the type of callback, the selected group/branch and the date/time.

For RMS callbacks the group/branch in the header will be the terminal location that the user is logged in at. As shown in the example report below, RMS Shop Callbacks will also include the selected RMS Customer. RMS Bill-To Callbacks will not have this field .

RMS Callbacks have a method of Manual except for the ARMS Auto type of callbacks and then the method is Automated .

Examples of the Standard Account and RMS Shop Account List reports are items A1 and A2 in the appendix



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### 3.2 Contact List

This report prints the following pieces of data for the selected Callback method, type, group, branch and account:

- Name
- Phone Number
- Number of Calls
- Left Messages

This report will include a header that informs the user of the type of callback, the selected group/branch, the selected account and the date/time .

For RMS callbacks the group/branch in the header will be the terminal location that the user is logged in at. As shown in the example report below, RMS Shop Callbacks will also include the selected RMS Customer. RMS Bill-To Callbacks will not have this field.

RMS Callbacks have a method of Manual except for the ARMS Auto type of callbacks and then the method is Automated .

Examples of the Standard Contact and RMS Shop Contact List reports are items A3 and A4 in the appendix

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### 3.3 Contract List

This report prints the following pieces of data for the selected Callback method, type, group, branch and contact:

- Name
- Contract Status
- Vehicle
- Claim/Pol/PO/RO
- Date of Loss
- Primary Reason
- Today's Action
- Days Outstanding
- Group/Branch

This report will include a header that informs the user of the type of callback, the selected group/branch and the date/time.

For RMS callbacks the group/branch in the header will be the terminal location that the user is logged in at. As shown in the example report below, RMS Shop Callbacks will also include the selected RMS Customer. RMS Bill-To Callbacks will not have this field.

RMS Callbacks have a method of Manual except for the ARMS Auto type of callbacks and then the method is Automated.

Examples of the Standard Contract and RMS Shop Contract List reports are items A5 and A6 in the appendix

If the user has selected 'All' contacts in the contacts table, the Contract report is slightly different. The report will print all of the contracts, grouping them by contact name. There will be a page break between contacts. It will follow the same format as the standard contract.

Examples of the Standard Account and RMS Shop Account List with All Contacts Selected reports are items A7 and A8 in the appendix

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### 3.4 Renter List

This report prints the following pieces of data for the selected Callback method, type, group and branch:

- Name
- Contract Status
- Current Amount Due
- Payment Type
- Home Phone Number
- Primary Reason
- Today's Action
- Days Outstanding
- Contract Number

This report will include a header that informs the user of the type of callback, the selected group/branch and the date/time.

This report does not apply to RMS Callbacks.

An Example of the Renter List report is item A9 in the appendix

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Callback Summary Print	

## Appendix A

### Callback Summary Report Examples

Enterprise Rent-A-Car  
 1234 Main Street  
 Denver, CO 80202  
 Phone: (303) 733-7333  
 Fax: (303) 733-7334  
 Email: info@enterprise.com  
 Website: www.enterprise.com

#



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# A1. Standard Account List

## Callback Account List

**Callback Type:** Bill-To      **Group/Branch:** 0101 – Ladue  
**Callback Method:** Manual      **Date/Time:** 11/2/2001 11:52 A

Name	Phone Number	Number of Calls	Left Messages	Account Number	Address
AAA Insurance	314-555-1111	2	0	AAA1010	1 Maple Street Ave.
Allstate Ins	314-555-6666	1	2	ALL0101	3 Elm Avenue
My Insurance Co	314-555-1010	10	10	MIC0101	6 Cherry Lane
Other Insurance Co	636-555-1111	12	12	OTH01011	4 Edgar Road
Some Guy's Ins.	636-555-7070	2	2	SGI1010	5 Glendale
State Farm Ins.	314-555-9119	0	0	STF0100	2 Main Street

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## A2. RMS-Shop Account List

### Callback Account List

**Callback Type:** RMS – Shop      **Group/Branch:** 0101 – Ladue  
**Callback Method:** Manual      **Date/Time:** 11/2/2001 11:52A  
**RMS Customer:** STF0101 – State Farm

Name	Phone Number	Number of Calls	Left Messages	Account Number	Address
Bob's Auto Body	314-555-1111	2	0	BAB1010	1 Maple Street Ave.
Carl's Cars	314-555-6666	1	2	CC0101	3 Elm Avenue
Davis Brothers	314-555-1010	10	10	DBA0101	6 Cherry Lane
George Incorporated	636-555-1111	12	12	GEI01011	4 Edgar Road
Some Guy's Fix-It	636-555-7070	2	2	SGF1010	5 Glendale
Zaber Auto Body.	314-555-9119	0	0	ZAB0100	2 Main Street

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### A3. Standard Contact List

Callback Contact List			
<b>Callback Type:</b>	Bill-To	<b>Group/Branch:</b>	0101 – Ladue
<b>Callback Method:</b>	Manual	<b>Date/Time:</b>	11/2/2001 11:52A
<b>Account:</b>	STF0101 – State Farm		
Name	Phone Number	Number of Calls	Left Messages
Mary Adams	314-555-9090	3	2
Mike Brady	314-555-0009	2	0
Nicole Jones	314-555-1020	0	0
Joe Kuebler	636-555-0101 ext 3	2	1
Samantha Peters	314-555-6432 ext 10	1	0
John Smith	636-555-1212	0	0
Andy Warren	314-555-7867 ext 100	2	1



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#### A4. RMS-Shop Contact List

Callback Contact List			
<b>Callback Type:</b>	RMS – Shop	<b>Group/Branch:</b>	0101 – Ladue
<b>Callback Method:</b>	Manual	<b>Date/Time:</b>	11/2/2001 11:52A
<b>RMS Account:</b>	STF0101 – State Farm		
<b>Account:</b>	BAB0101 - Bob's Auto Body		
Name	Phone Number	Number of Calls	Left Messages
Mary Adams	314-555-9090	3	2
Mike Brady	314-555-0009	2	0
Nicole Jones	314-555-1020	0	0
Joe Kuebler	636-555-0101 ext 3	2	1
Samantha Peters	314-555-6432 ext 10	1	0
John Smith	636-555-1212	0	0
Andy Warren	314-555-7867 ext 100	2	1

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Callback Summary Print	

## A5. Standard Contract List

### Callback Contract List

**Callback Type:** Bill-To  
**Callback Method:** Manual  
**Account:** STF0101 – State Farm  
**Group/Branch:** 0101 – Ladue  
**Date/Time:** 11/2/2001 11:52A  
**Contact:** Mary Adams  
**Phone:** 314-555-9090

Name	Stat.	Vehicle	Claim/Pol /PO/RO	Date of Loss	Primary Reason	Today's Action	Day s Out.	Group /Branch
John Doe	O	Ford Escort	101010	10/20/200 1	Auth Ext.	Left Message	2	0102
Dan Egleston	O	Honda Civic	393939	11/02/200 1	Init Auth	No Answer	0	0101
James Farwig	O	VW Jetta	2	09/02/200 1	Auth Ext.		10	0103
Julie Loft	CP	BMW 320i	20929	10/31/200 1	Auth Ext.		2	0124
Richard Smith	R	Honda Prelude	1a021	11/01/200 1	Init Auth	Will Call Back	1	0115

	Version: 1.2
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Callback Summary Print	

## A6. RMS-Shop Contract List

### Callback Contract List

<b>Callback Type:</b>	RMS - Shop	<b>Group/Branch:</b>	0101 – Ladue
<b>Callback Method:</b>	Manual	<b>Date/Time:</b>	11/2/2001 11:52A
<b>RMS Account:</b>	STF0101 – State Farm	<b>Contact:</b>	Mary Adams
<b>Account:</b>	BAB0101 – Bob's Auto Body	<b>Phone:</b>	314-555-9090

Name	Stat.	Vehicle	Claim/ ol /PO/RO	Date of Loss	Primary Reason	Today's Action	Day s Out.	Group /Branch
John Doe	O	Ford Escort	101010	10/20/2001	Auth Ext.	Left Message	2	0102
Dan Egleston	CP	Honda Civic	393939	11/02/2001	Init Auth	No Answer	0	0101
James Farwig	O	VW Jetta	2	09/02/2001	Auth Ext.		10	0103
Julie Loft	O	BMW 320i	20929	10/31/2001	Auth Ext.		2	0124
Richard Smith	R	Honda Prelude	1a021	11/01/2001	Init Auth	Will Call Back	1	0115

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#### A7. Standard Contract List – All Contacts Selected

Callback Contract List								
<b>Callback Type:</b>			Bill-To		<b>Group/Branch:</b> 0101 – Ladue			
<b>Callback Method:</b>			Manual		<b>Date/Time:</b> 11/2/2001 11:52A			
<b>Account:</b>			STF0101 – State Farm		<b>Contact:</b> Mary Adams			
					<b>Phone:</b> 314-555-9090			
Name	Stat.	Vehicle	Claim/Pol /PO/RO	Date of Loss	Primary Reason	Today's Action	Day s Out.	Group /Branch
John Doe	O	Ford Escort	101010	10/20/200 1	Auth Ext.	Left Message	2	0102
Dan Egleston	O	Honda Civic	393939	11/02/200 1	Init Auth	No Answer	0	0101
James Farwig	O	VW Jetta	2	09/02/200 1	Auth Ext.		10	0103
Julie Loft	CP	BMW 320i	20929	10/31/200 1	Auth Ext.		2	0124
Richard Smith	R	Honda Prelude	1a021	11/01/200 1	Init Auth	Will Call Back	1	0115

-----Page Break-----

Callback Contract List								
<b>Callback Type:</b>			Bill-To		<b>Group/Branch:</b> 0101 – Ladue			
<b>Callback Method:</b>			Manual		<b>Date/Time:</b> 11/2/2001 11:52A			
<b>Account:</b>			STF0101 – State Farm		<b>Contact:</b> Mike Brady			
					<b>Phone:</b> 314-555-0009			
Name	Stat.	Vehicle	Claim/Pol /PO/RO	Date of Loss	Primary Reason	Today's Action	Day s Out.	Group /Branch
John Doe	O	Ford Escort	101010	10/20/200 1	Auth Ext.	Left Message	2	0102
Dan Egleston	O	Honda Civic	393939	11/02/200 1	Init Auth	No Answer	0	0101
James Farwig	O	VW Jetta	2	09/02/200 1	Auth Ext.		10	0103
Julie Loft	CP	BMW 320i	20929	10/31/200 1	Auth Ext.		2	0124

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Richard Smith	R	Honda Prelude	1a021	11/01/200 1	Init Auth	Will Call Back	1	0115
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Rest of Contacts to Follow.

	Version: 1.2
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Callback Summary Print	

#### A8. RMS Shop Contract List – All Contacts Selected

### Callback Contract List

**Callback Type:** RMS - Shop      **Group/Branch:** 0101 – Ladue  
**Callback Method:** Manual      **Date/Time:** 11/2/2001 11:52A  
**RMS Account:** STF0101 – State Farm      **Contact:** Mary Adams  
**Account:** BAB0101 – Bob's Auto Body      **Phone:** 314-555-9090

Name	Stat.	Vehicle	Claim/ ol /PO/RO	Date of Loss	Primary Reason	Today's Action	Day s Out.	Group /Branch
John Doe	O	Ford Escort	101010	10/20/2001	Auth Ext.	Left Message	2	0102
Dan Egleston	CP	Honda Civic	393939	11/02/2001	Init Auth	No Answer	0	0101
James Farwig	O	VW Jetta	2	09/02/2001	Auth Ext.		10	0103
Julie Loft	O	BMW 320i	20929	10/31/2001	Auth Ext.		2	0124
Richard Smith	R	Honda Prelude	1a021	11/01/2001	Init Auth	Will Call Back	1	0115

--- Page Break---

### Callback Contract List

**Callback Type:** RMS - Shop      **Group/Branch:** 0101 – Ladue  
**Callback Method:** Manual      **Date/Time:** 11/2/2001 11:52A  
**RMS Account:** STF0101 – State Farm      **Contact:** Mike Brady  
**Account:** BAB0101 – Bob's Auto Body      **Phone:** 314-555-0009

Name	Stat.	Vehicle	Claim/ ol /PO/RO	Date of Loss	Primary Reason	Today's Action	Day s Out.	Group /Branch
John Doe	O	Ford Escort	101010	10/20/2001	Auth Ext.	Left Message	2	0102
Dan Egleston	CP	Honda Civic	393939	11/02/2001	Init Auth	No Answer	0	0101
James Farwig	O	VW Jetta	2	09/02/2001	Auth Ext.		10	0103
Julie Loft	O	BMW 320i	20929	10/31/2001	Auth Ext.		2	0124
Richard Smith	R	Honda Prelude	1a021	11/01/2001	Init Auth	Will Call	1	0115

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[Back](#)

Rest of Contacts to Follow.

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Callback Summary Print	

## A9. Renter List

Callback Renter List								
<b>Callback Method:</b>		Renter		<b>Group/Branch:</b>		0101 – Ladue		
<b>Callback Type:</b>		Manual		<b>Date/Time:</b>		11/2/2001 11:52A		
Name	Stat.	Current Amount Due	Payment Type	Home Phone Number	Primary Reason	Today's Action	Days Out.	Contract Number
James Doe	O	\$100.00	Cash	314-555-5345	Balance Due	Left Message	10	Ad34jk
Allie Edwards	CP	\$0.00	Credit Card	314-555-1103	Max. Auth	No Answer	1	2A299
George Dire	R	\$0.00	Cash	314-555-6542	Ticket Rewrite		1	11399A





**Project:**  
Callback

**Phase:**  
Elaboration

**Iteration:**  
N/A

## Callback Callback Supplementary Specification

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Callback

**Phase:**  
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## Revision History

Date	Version	Description	Author
15-May-01	1.0	Creation	Pin Koh
11-Jun-01	1.1	Changed scenario description of all rules	Pin Koh
14-Jun-01	1.11	Changed English	David Flynn
07-Aug-01	1.12	Changed wording on the Renter scenarios	Leanne Bevelhimer
13-Aug-01	1.13	Re-worded scenarios	Leanne Bevelhimer
14-Aug-01	1.2	Updated based on meeting with Mary and Jon	Leanne Bevelhimer

**Project:**  
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Callback Supplementary Specification

## 1. Introduction

The **Supplementary Specification** captures the system requirements that are not readily captured in the all use cases of the use-case model for callback

### 1.1 Purpose

The purpose of this document is to detail callback generation and completion for all rules.

### 1.2 Scope

This document supports all the use cases pertaining to the **Callback** project.

#### 1.2.1.1 Definitions, Acronyms and Abbreviations

Refer to the **Glossary** document for details.

### 1.3 References

Generate Callback Use Case

### 1.4 Overview

The main content of this document attempts to document in detail the business rule<sup>#</sup> that governs the life-cycle of all callbacks. It describes the conditions, actions and results that affects callbacks.

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Callback

**Phase:**  
Elaboration

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N/A

## 2. Functionality

This section describes the rules to generate, update, complete and remove callbacks. Also described is the determination of date to make the callback.

### 2.1 Callback Date

Callback date is defined as the **date to perform** the callback and is determined differently by each rule.

For new callback, this data should not be less than the date of creation of callback - user callbacks should not be penalized with a back dated callback that is created today.

### 2.2 Obtain Repair Status

#### 2.2.1 General Rule- Obtain Repair Status requires that the rental contract status be open.

Scenario	Callback and Status at event of Scenario	Action
<u>S1 The user enters a new Shop for a new or existing rental. The Estimated Completion date is optional.</u>	No Obtain Repair Status callback exists for this new shop	Create an Obtain Repair Status callback, based on the Estimated Completion Date or Bill-To Extension date, with incomplete status
<u>S2 The user retrieves a rental contract. The user then changes the Estimated Completion Date or Bill-To Extension Date to a valid date.</u>	An incomplete Obtain Repair Status callback exists.	Complete the existing Obtain Repair Status callback and Create an Obtain Repair Status callback, based on the Estimated Completion Date or Bill-To Extension date, with incomplete status

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Callback

**Phase:**  
Elaboration

**Iteration:**  
N/A

<u>S3</u> The user is informed that another Shop will do repairs on the renter's car. The user then retrieves a rental contract and changes the shop account on an existing contract.	An incomplete Obtain Repair Status callback exists.	Remove the existing Obtain Repair Status callback for the original Shop account and Create a new Obtain Repair Status callback, for the new Shop account based on the Estimated Completion Date or Bill-To Extension date, with incomplete status
<u>S4</u> The user retrieves a rental contract and makes changes that does not satisfy the callback generation criteria for the Obtain Repair Status callback. E.g. 1. <u>Close</u> open ticket ('Open' to 'CLOSED/Pending'). 2. <u>Remove</u> the Shop account.	An incomplete Obtain Repair Status callback exists.	Remove the incomplete Obtain Repair Status callback

#### 2.2.1.1 Callback Date for Obtain Repair Status

Obtain Repair Status Callback date will be greater or equal to the date of Event

Callback Action	Callback Date
Create, Update	<ul style="list-style-type: none"> <li>The callback date is the Estimated Completion Date or the Bill-To Extension Date which ever is earlier.</li> <li>If either the Estimated Completion Date or the Bill-To Extension Date is empty, the callback date is the field that contains a valid date.</li> </ul>

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N/A

Callback Action	Callback Date
	<ul style="list-style-type: none"> <li>If both the Estimated Completion Date and the Bill-To Extension Date is empty, the callback date is the current date.</li> <li>If the callback date (as determined from above) is less than the current date, use current date.</li> </ul>

## 2.2.2 Obtain Repair Status (RMS) Rule

Generation rule will follow the general rule.

### 2.2.2.1 Callback Date for Obtain Repair Status (RMS) Rule

Callback date is determined by the following order:

1. Callback Date\* of RMS Callback Contract by Group/Branch/Ticket Legacy file(CB032P)

Where

CB032P Legacy Rental Contract Number = Rental Contract Number

AND

CB032P Group ID = Owning Group ID

AND

CB032P Branch ID = Owning Branch ID

OR

2. Next nearest Date of Day of Call\*\* of RMS Customer Legacy file (CB030P)

Where

CB030P Customer Number = Bill-To's Customer number

OR

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**Project:**

Callback

**Phase:**

Elaboration

**Iteration:**

N/A

**3. Minimum of (Estimated Completion Date, Bill-To(not of Shop)'s Extension Date, Date of Insertion of callback)**

\*This date is an absolute date (e.g. Jan 01 2002) and should be final and cannot be changed or affected by thresholds or slides

\*\*This day is of value 1 to 7 - matching day of the week ( 1 representing Monday). Should not be affected by thresholds or slides

**2.2.3 Obtain Repair Status (ARMS) Rule**

Generation rule will follow the general rule.

**2.2.3.1 Callback Date for Obtain Repair Status (ARMS) Rule**

Determined by the following order:

**1. Minimum (Estimated Completion Date, Shop's Extension Date) - 1 day**

Where

Rental Contract's Reservation Origin = 'ARMS'

AND

Bill-To's Customer Sequence Number = ARMSPR1's Profile ID

AND

ARMSPR1 P1YN21 = 'Y'

OR

**2. Minimum of (Estimated Completion Date, Bill-To(not of Shop)'s Extension Date, Date of Insertion callback)**

**2.2.4 Completion Criteria**

**2.2.4.1 General Rule**

Callback is complete when:

Estimated Completion Date is changed

OR

Extension date of Bill-To(not of Shop)'s Extension Date is changed.

**2.2.4.2 ARMS**

Same as above.

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### Phase: Elaboration

**Iteration:** N/A

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**Phase:**  
Elaboration

**Iteration:**  
N/A

### 2.3 Obtain Initial Authorization

2.3.1 General Rule- Obtain Initial Authorization requires that the rental contract status to be 'reservation/open', 'open', 'open/pre-write', or 'CLOSE/Pending'

Scenario	Callback and Status at event of Scenario	Action
S1 The user enters a new Bill-To for a rental contract with Authorization Status as 'Pending' or 'Authorized' without an extension date	No Obtain Initial Authorization callback exists for this new Bill-To.	Create an Obtain Initial Authorization callback with incomplete status
S3 The user retrieves a rental contract and change the authorization status of an existing Bill-To from an 'Authorized' status with a valid Extension Date, Reimbursed, Terminated, or Declined, to 'Pending' or 'Authorized' without an extension date.	No Obtain Initial Authorization callback exists for this existing Bill-To.	Create an Obtain Initial Authorization callback with incomplete status
S2 The user retrieves a rental contract and changes the authorization status of an existing Bill-To from a 'Pending' status to an 'Authorized' status with a valid extension date	An incomplete Obtain Initial Authorization callback exists.	Completes the existing Obtain Initial Authorization callback.
S4 The user retrieves a rental contract and makes changes that does not satisfy Obtain Initial Authorization callback generation criteria E.g. 1. Set the Authorization Status to Reimbursed, Terminated, or Declined. 2. Void a reservation. 3. Close open ticket ('CLOSE/Pending' to 'CLOSED'), or	An incomplete Obtain Initial Authorization callback exists.	Remove incomplete Obtain Initial Authorization callback

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**Phase:**  
Elaboration

**Iteration:**  
N/A

4. Remove a Bill-To

### 2.3.1.1 Callback Date for Obtain Initial Authorization

Initial Authorization Callback date will be equal to the date of Event

Callback Action	Callback Date
Create	Current Date

### 2.3.2 Obtain Initial Authorization (RMS) Rule

Generation rule will follow the general rule.

#### 2.3.2.1 Callback Date for Obtain Initial Authorization (RMS) Rule

Callback date is determined by the following order :

1. Callback Date\* of RMS Callback Contract by Group/Branch/Ticket Legacy file(CB032P)

Where

CB032P Legacy Rental Contract Number = Rental Contract Nbr

AND

CB032P Group ID = Owning Group ID

AND

CB032P Branch ID = Owning Branch ID

OR

2. Next nearest Date of Day of Call\*\* of RMS Customer Legacy file (CB030P)

Where

CB030P Customer Number = Bill-To's Customer number

OR

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**Phase:**

Elaboration

**Iteration:**

N/A

**3. Date of insertion of callback**

\*This date is an absolute date (e.g. Jan 01 2002) and should be final and cannot be changed or affected by thresholds or slides  
\*\*This day is of value 1 to 7 - matching day of the week ( 1 representing Monday). Should not be affected by thresholds or slides

**2.3.3 Completion Criteria**

**2.3.3.1 General Rule**

Callback is complete when:

1. Authorization Status of value other than 'Pending' and Null

AND

2. Bill-To Extension Date is Not Null

**2.3.3.2 RMS**

Same as above.

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**Phase:**  
Elaboration

**Iteration:**  
N/A

## 2.4 Obtain Authorization Extension

2.4.1 **General Rule** - The following scenarios apply only to those rental contracts that are in an open, open/pre-write, or close/pending status.

Scenario	Callback and Status at event of Scenario	Action
<b>S1</b> The user enters a New Bill-To for a rental contract with given Authorization Status as 'Authorized' and a valid Extension date	No Obtain Authorization Extension callback exists for this new Bill-To.	Create an Obtain Authorization Extension callback, based on the Extension date, with incomplete status.  <i>*Note: An Obtain Initial Authorization <u>will not</u> be generated and completed.</i>
<b>S2</b> The user retrieves a rental contract and changes the authorization status of an existing Bill-To, possibly from 'Pending' to 'Authorized', and gives a valid Extension Date	No Obtain Authorization Extension callback exists for this existing Bill-To.	Create an Obtain Authorization Extension callback, based on the Extension date, with incomplete status  <i>*Note: If an Obtain Initial Authorization callback exists, the Obtain Initial Authorization callback will be completed.</i>
<b>S3</b> The user retrieves a rental contract and changes the extension date on an existing Bill-To which is 'Authorized'.	An incomplete Obtain Authorization Extension callback for the previous extension date exists.	Completes the existing Obtain Authorization Extension callback and Create an Obtain Authorization Extension callback, based on the new Extension date, with incomplete status

**Project:**  
Callback

**Phase:**  
Elaboration

**Iteration:**  
N/A

<p><u>S4 The user retrieves a rental contract and makes changes that does not satisfy the generation criteria for the Obtain Authorization Extension callback</u>  <u>E.g.</u></p> <ol style="list-style-type: none"> <li><u>1. Close open ticket ('CLOSE/Pending' to 'CLOSED').</u></li> <li><u>2. Change Bill-To authorization status from 'Authorized' to any other status, or</u></li> <li><u>3. Remove the Bill-To Extension Date</u></li> </ol>	<p>An incomplete Obtain Authorization Extension callback exists.</p>	<p>Remove incomplete Obtain Authorization Extension callback</p>
---	--	--

#### 2.4.1.1 Callback Date for Obtain Authorization Extension

Callback Action	Callback Date
Create	Extension Date
Update	Extension Date

#### 2.4.2 Obtain Initial Authorization (RMS) Rule

Generation rule will follow the general rule.

#### 2.4.2.1 Callback Date for Obtain Authorization Extension(RMS) Rule

Callback date is determined by the following order:

1. Callback Date\* of RMS Callback Contract by Group/Branch/Ticket Legacy file(CB032P) Where  
CB032P Legacy Rental Contract Number = Rental Contract Number

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**Phase:**  
Elaboration

**Iteration:**  
N/A

AND

CB032P Group ID = Owning Group ID

AND

CB032P Branch ID = Owning Branch ID

OR

2. Next nearest Date of Call\*\* of RMS Customer Legacy file (CB030P)

Where

CB030P Customer Number = Bill-To's Customer number

OR

3. Date of insertion of callback

\*This date is an absolute date (e.g. Jan 01 2002) and should be final and cannot be changed or affected by thresholds or slides  
\*\*This day is of value 1 to 7 - matching day of the week ( 1 representing Monday). Should not be affected by thresholds or slides

#### **2.4.3 Completion Criteria**

##### **2.4.3.1 General Rule**

Callback is complete when:

1. Authorization Status is 'Authorized'

AND

2. Bill-To Extension Date is changed

##### **2.4.3.2 RMS**

Same as above.

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**Project:**  
Callback

**Phase:**  
Elaboration

**Iteration:**  
N/A

## 2.5 Last Day Notification

Last Day Notification callback is inserted when there is a Renter and the Last Day Date is a valid date. Every time the Last Day Date is changed, a new callback will be created if no incomplete Last Day Notification callback exists. Otherwise, the callback date will be updated if a callback exists with an incomplete status.

### 2.5.1 General Rule – Last Day Notification requires that the rental contract status be open, open/pre-write

Scenario	Callback and Status at event of Scenario	Action
<u>S1 The user enters a new rental contract and enters a valid last day date (in the future)</u>	No Last Day Notification callback exists for this new Rental.	Create a Last Day Notification callback, based on the last day date, with an incomplete status
<u>S2 The user retrieves a rental contract and changes the last day date.</u>	An incomplete Last Day Notification callback for the original last day date exists.	Update the existing callback date. Callback is still incomplete.
<u>S3 The user retrieves a rental contract and make changes that does not satisfy the generation criteria for the Last Day Notification callback</u> E.g. 1. <u>Change rental status to 'CLOSE/Pending', or</u> 2. <u>Remove the last day date</u>	An incomplete Last Day Notification callback exists.	Remove incomplete Last Day Notification callback

## 2.5.2 Callback Date

Callback Action	Callback Date
Create, Update	Last Day Date

## 2.5.3 Completion Criteria

Callback is complete when:

1. The user calls the renter and decides to indicate that callback is complete.

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**Project:**  
Callback

**Phase:**  
Elaboration

**Iteration:**  
N/A

## 2.6 Balance Due

### 2.6.1 General Rule – Balance Due requires that the rental contract status be open, open/pre-write, or close pending.

Scenario	Callback and Status at event of Scenario	Action
<u>S1</u> The user opens a new rental contract	No Balance Due callback exists for this new Renter.	If renter balance due amount is greater than 0 insert an Balance Due callback with incomplete status. Totaling the renter payments and the bill-to authorizations then subtracting this from the total charges determines the balance due.incomplete
<u>S2</u> The user retrieves a rental contract with an existing Renter and changes are made to either the Renter's payments, Bill-To authorization or any other information related to calculating renter balance due.	An incomplete Balance Due callback exist	If renter balance due amount is greater than 0 update the existing Balance Due callback's date. Totaling the renter payments and the bill-to authorizations then subtracting this from the total charges determines the balance due.
	No Balance Due callback exist for renter	If renter balance due amount is greater than 0 insert a Balance Due callback with incomplete status. Totaling the renter payments and the bill-to authorizations then subtracting this from the total charges determine the balance due.incomplete
<u>S3</u> The user retrieves a rental contract and make changes that does not satisfy the generation criteria for a Balance Due callback E.g.	An incomplete Balance Due callback exist.	Remove incomplete Balance Due callback

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Callback

**Phase:**  
Elaboration

**Iteration:**  
N/A

1. <u>Change rental status to 'CLOSE' or</u>	
2. <u>Renter balance due amount is less than or equal to all deposits plus credit card authorization plus Bill-To authorization.</u>	

## 2.6.2 Callback Date

Callback Action	Callback Date
Create, Update	The date the balance due exceeds 0.

## 2.6.3 Completion Criteria

Callback is complete when:

1. The user calls renter and indicate that callback is complete. The user decides.

## 2.7 Past Estimated Return Date

### 2.7.1 General Rule - Past Estimated Return Date requires that the rental contract status be open, open/pre-write

Scenario	Callback and Status at event of Scenario	Action
<u>S1 The user opens a ticket and enters an estimated return date.</u>	No Past Estimated Return Date callback exists for this new Renter.	Create a Past Estimated Return Date callback with an incomplete status
<u>S2 The user opens a ticket and does not enter an estimated return date.</u>	No Past Estimated Return Date callback exists for this new Renter	Do not create a callback.
<u>S3 The user retrieves a rental contract and changes the estimated return date.</u>	An incomplete Past Estimated Return Date callback for the original estimated return date exist.	Completes the existing Past Estimated Return Date callback and Creates a new Past Estimated Return Date callback with an incomplete status for the new estimated return date

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**Project:**  
Callback

**Phase:**  
Elaboration

**Iteration:**  
N/A

<p><b>S4</b> The user retrieves a rental contract and makes changes that does not satisfy the generation criteria for the Past Estimated Return Date callback  <u>E.g.</u>            1. <u>Change rental status to 'CLOSE/Pending', or</u>            2. <u>Remove the estimated return date</u></p>	<p>An incomplete Past Estimated Return Date callback exists.</p>	<p>Remove the incomplete Past Estimated Return Date callback</p>
---	--	--

**2.7.2 Callback Date**

Callback Action	Callback Date
Create	Estimated Return Date
Update	Estimated Return Date, if Estimated Return Date Changed

**2.7.3 Completion Criteria**

Callback is complete when:  
 1. Estimated Return Date changed.

**Project:**  
Callback

**Phase:**  
Elaboration

**Iteration:**  
N/A

## 2.8 Ticket Rewrite

### 2.8.1 General Rule – Ticket Rewrite requires that the rental contract status be open, open/pre-write

Scenario	Callback and Status at event of Scenario	Action
S1 The user opens a ticket.	No Ticket Rewrite callback exists for this new ticket.	Create a Ticket Rewrite callback with incomplete status
S2 The user retrieves a rental contract and changes the rental status to 'CLOSE/Pending' or 'CLOSE'.	An incomplete Ticket Rewrite callback exists.	Complete the Ticket Rewrite callback

## 2.8.2 Callback Date

Callback Action	Callback Date
Create, Update	27 days after the ticket is opened.

## 2.8.3 Completion Criteria

Estimated Return Date is changed

## 2.9 Maximum Authorized Amount Reached

### 2.9.1 General Rule – Maximum Authorized Amount Reached requires that the rental contract status be open, open/pre-write

Scenario	Callback and Status at event of Scenario	Action
S1 The user opens a ticket with a new Bill-To	No Maximum Authorized Amount Reached callback exists for this new Renter.	Create a Maximum Authorized Amount Reached callback.
S2 The user retrieves a rental contract with an existing Bill-To and changes information that	An incomplete Maximum Authorized Amount Reached callback exist.	Completes the existing Maximum Authorized Amount callback and set Bill-To

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Callback

**Phase:**  
Elaboration

**Iteration:**  
N/A

determines estimated charges and Bill-To has not been notified of Maximum Authorized Amount Reached callback		notified of Maximum Authorized Amount
<p><b>S3</b> The user retrieves a rental contract and make changes that does not satisfy to generate a Maximum Authorized Amount callback</p> <p>E.g.</p> <ol style="list-style-type: none"> <li>1. Change rental status to 'CLOSE/Pending' or CLOSED, or</li> <li>2. Void Bill-To</li> </ol>	An incomplete Maximum Authorized Amount callback exist.	Remove incomplete Maximum Authorized Amount callback

## 2.9.2 Callback Date

Callback Action	Callback Date
Create	(Date that estimated charges for Bill-To's authorized amount) minus 1 day
Update	(Date that estimated charges for Bill-To's authorized amount) minus 1 day

## 2.9.3 Completion Criteria

To be determined

## 2.10 Miscellaneous

## 3. Usability

Nil

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Callback

**Phase:**

Elaboration

**Iteration:**

N/A

**4. Reliability**

Nil

**5. Performance**

**5.1 Callback Generation**

Callback should be generated as near real-time as possible

**6. Supportability**

Nil

**7. Design Constraints**

Nil

**8. Online The user Documentation and Help System Requirements**

Nil

**9. Purchased Components**

Nil

**10. Interfaces**

Nil

**10.1 Hardware Interfaces**

Nil

**10.2 Software Interfaces**

Nil

**10.3 Communications Interfaces**

Nil

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N/A

### 11. Licensing Requirements

Nil

### 12. Legal, Copyright and Other Notices

Nil

### 13. Applicable Standards

Nil

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## ECARS 2.0 Screen Action Specification: Callback Summary

Version 1.0

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**Project:**  
Callbacks

**Phase:**  
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**Iteration:**  
1

## Revision History

Date	Version	Description	Author
04/12/2001	1.0	Created Screen Action Specification	David Flynn
7/13/2001	1.01	Added Addendum for expandable table. Updated Screen shots to current implementation	David Flynn
8/14/2001	1.02	Updated wording to be more consistent with the newer versions.	

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## Screen Action Specification

1. Introduction
2. Screen Print

Enterprise® ECARS Application - Microsoft Internet Explorer provided by Enterprise R...

File Reservation Contracts Callbacks Rates Tools Help ARMS

**Method (Calls)**

Manual (71)

Shop (1)

BillTo (65)

Renter (5)

Automated (0)

Shop (0)

BillTo (0)

Fax (0)

Shop (0)

BillTo (0)

Consolidated (4)

Shop (2)

BillTo (2)

**Manual Callbacks - Shop**

Group: 01 - ST LOUIS Branch: LADUE RENTAL 0101 Search

Customer

Name	Telephone No.	No of Calls	Left Messages	Customer No	Address
AAMCO		1	1		217-83 HEMPSTEAD AVE

Contact

Name	Telephone No.	No of Calls	Left Messages
-- All --		1	1
ERIC	7184798977	1	1

Update Message Status

Renter

Name	Vehicle	Claim/Pol/PD/RD	Date of Loss	Primary Reason	Today's Action	Days Outstanding	Contract Number
SHERRIE	2001 BUICK			Obtain Repair	Left	32	686894
BLACK	CENTURY			Status	Message		

Perform Callbacks

Figure 1: Shop and Bill To Callback Summary.

**Project:**  
Callbacks

**Phase:**  
Elaboration

**Iteration:**  
1

Enterprise® ECARS Application - Microsoft Internet Explorer provided by Enterprise R...

File Reservation Contracts Callbacks Rates Tools Help ARMS

**Method (Calls)** **Manual Callbacks - Renter**

Manual (71) Group: 01 - ST LOUIS Branch: LADUE RENTAL 0101 Search

Shop (1) BillTo (65)

Renter (5)

Automated (0)

Shop (0) BillTo (0)

Fax (0)

Shop (0) BillTo (0)

Consolidated (+)

Shop (2) BillTo (2)

Name	Current Amount Due	Payment Type	Home Phone No.	Primary Reason	Today's Action	Days Outstanding	Contract Number
SHERRIE BLACK	\$89.33	CASH	6637578	Past Estimated	Left Message	421	686894
EDNA GREEN	\$58.65	CASH	9911737	Past Estimated		392	731110
KEN PARKS	\$212.31	CASH		Past Estimated	No Answer	44	688211
RICHARD SHELVEY	\$512.36	CASH	4326676	Past Estimated	No Answer	44	654272
STEVEN WILLIAMS	\$56.23	CASH	8439623	Past Estimated	Will Call Back	44	655317

Update Message Status Perform Callbacks

Figure 2: Renter Callback Summary screen.

Message Status - Mi...

☒ Left Message  
☐ No Answer  
☐ Contact Will Call Back

Person Contacted

Apply Apply to All Cancel

Figure 3: Message Status Dialog - Displayed when the Update Message Button is pressed

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## 2.1 NavigationBar

### 2.1.1 *Manual Total*

#### 2.1.1.1 Behavior

This output only field will display the total number of Manual Callbacks for selected Group Branch.

#### 2.1.1.2 Validation

None specified at this time.

#### 2.1.1.3 Business Exceptions

None specified at this time.

#### 2.1.1.4 System Exceptions

None specified at this time.

### 2.1.2 *ManualShopTotal*

#### 2.1.2.1 Behavior

This button will display the total number of Manual Shop Callbacks for the selected Group Branch. When this button is pressed, the Content Panels Account Table is refreshed to show data for Manual Shop callbacks for the selected Group Branch, and the renter and Contact Tables are cleared. Both the Perform Callbacks and Update Message Status buttons are visible, but disabled.

#### 2.1.2.2 Validation

None specified at this time.

#### 2.1.2.3 Business Exceptions

None specified at this time.

#### 2.1.2.4 System Exceptions

None specified at this time.

### 2.1.3 *ManualBillToTotal*

#### 2.1.3.1 Behavior

This button will display the total number of Manual Bill-To Callbacks for the selected Group Branch. When this button is pressed, the Content Panels Account Table is refreshed to show data for Manual Bill-To callbacks for the selected Group Branch, and the renter and Contact Tables are cleared. Both the Perform Callbacks and Update Message status buttons are visible, but disabled.

#### 2.1.3.2 Validation

None specified at this time.

#### 2.1.3.3 Business Exceptions

None specified at this time.

#### 2.1.3.4 System Exceptions

None specified at this time.

#### 2.1.4 ManualRenterTotal

##### 2.1.4.1 Behavior

This button will display the total number of Manual Renter Callbacks for the selected Group Branch. When this button is pressed, the Content Panel's Renter Table is refreshed to show data for Manual Renter callbacks for the selected Group Branch. Only the Renter Table is visible and only the Perform Callbacks button is visible, but disabled.

##### 2.1.4.2 Validation

None specified at this time.

##### 2.1.4.3 Business Exceptions

None specified at this time.

##### 2.1.4.4 System Exceptions

None specified at this time.

#### 2.1.5 Automated Total

This output only field will display the total number of Automated Callbacks for the selected Group Branch.

##### 2.1.5.1 Behavior

##### 2.1.5.2 Validation

None specified at this time.

##### 2.1.5.3 Business Exceptions

None specified at this time.

##### 2.1.5.4 System Exceptions

None specified at this time.

#### 2.1.6 AutomatedShopTotal

##### 2.1.6.1 Behavior

This button will display the total number of Automated Shop Callbacks for the selected Group Branch. When this button is pressed, the Content Panel's Account Table is refreshed to show data for Automated Shop callbacks for the selected Group Branch, and the Renter and Contact Tables are cleared. Neither the Perform Callbacks nor the Update Message Status buttons are enabled.

##### 2.1.6.2 Validation

None specified at this time.

##### 2.1.6.3 Business Exceptions

None specified at this time.



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#### 2.1.6.4 System Exceptions

None specified at this time.

#### 2.1.7 AutomatedBillToTotal

##### 2.1.7.1 Behavior

This button will display the total number of Automated Bill-To Callbacks for the selected Group Branch. When this button is pressed, the Content Panel's Account Table is refreshed to show data for Automated Bill-To callbacks for the selected Group Branch, and the Renter and Contact Tables are cleared. Neither the Perform Callbacks nor the Update Message Status buttons are enabled.

##### 2.1.7.2 Validation

None specified at this time.

##### 2.1.7.3 Business Exceptions

None specified at this time.

##### 2.1.7.4 System Exceptions

None specified at this time.

#### 2.1.8 FaxTotal

##### 2.1.8.1 Behavior

This output only field will display the total number of Fax Callbacks for the selected Group Branch.

##### 2.1.8.2 Validation

None specified at this time.

##### 2.1.8.3 Business Exceptions

None specified at this time.

##### 2.1.8.4 System Exceptions

None specified at this time.

#### 2.1.9 FaxShopTotal

##### 2.1.9.1 Behavior

This button will display the total number of Fax Shop Callbacks for the selected Group Branch. When this button is pressed, the Content Panel's Account Table is refreshed to show data for Fax Shop callbacks for the selected Group Branch, and the Renter and Contact Tables are cleared. Neither the Perform Callbacks nor the Update Message Status buttons are enabled.

##### 2.1.9.2 Validation

None specified at this time.

##### 2.1.9.3 Business Exceptions

None specified at this time.

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#### 2.1.9.4 System Exceptions

None specified at this time.

#### 2.1.10 FaxBillToTotal

##### 2.1.10.1 Behavior

This button will display the total number of Automated Shop Callbacks for the selected Group Branch. When this button is pressed, the Content Panel's Account Table is refreshed to show data for Automated Shop callbacks for the selected Group Branch, and the Renter and Contact Tables are cleared. Neither the Perform Callbacks nor the Update Message Status buttons are enabled.

##### 2.1.10.2 Validation

None specified at this time.

##### 2.1.10.3 Business Exceptions

None specified at this time.

##### 2.1.10.4 System Exceptions

None specified at this time.

#### 2.1.11 ConsolodatedTotal

##### 2.1.11.1 Behavior

This output only field will display the total number of Consolidated Callbacks for the selected Group Branch.

##### 2.1.11.2 Validation

None specified at this time.

##### 2.1.11.3 Business Exceptions

None specified at this time.

##### 2.1.11.4 System Exceptions

None specified at this time.

#### 2.1.12 ConsolodatedShopTotal

##### 2.1.12.1 Behavior

This button will display the total number of Consolidated Shop Callbacks for the selected Group Branch. When this button is pressed, the Content Panel's Account Table is refreshed to show data for Consolidated Shop callbacks for the selected Group Branch, and the Renter and Contact Tables are cleared. Neither the Perform Callbacks nor the Update Message Status buttons are enabled.

##### 2.1.12.2 Validation

None specified at this time.

#### 2.1.12.3 Business Exceptions

None specified at this time.

#### 2.1.12.4 System Exceptions

None specified at this time.

#### 2.1.13 *ConsolidatedBillToTotal*

##### 2.1.13.1 Behavior

This button will display the total number of Consolidated Bill-To Callbacks for the selected Group Branch. When this button is pressed, the Content Panel's Account Table is refreshed to show data for Consolidated Bill-To callbacks for the selected Group Branch, and the Renter and Contact Tables are cleared. Neither the Perform Callbacks nor the Update Message Status buttons are enabled.

##### 2.1.13.2 Validation

None specified at this time.

##### 2.1.13.3 Business Exceptions

None specified at this time.

##### 2.1.13.4 System Exceptions

None specified at this time.

#### 2.1.14 *RMS Total*

##### 2.1.14.1 Behavior

This output only field will display the total number of RMS Callbacks for selected Group Branch.

##### 2.1.14.2 Validation

This field is only displayed for an RMS employee.

##### 2.1.14.3 Business Exceptions

None specified at this time.

##### 2.1.14.4 System Exceptions

None specified at this time.

#### 2.1.15 *RMSShopTotal*

##### 2.1.15.1 Behavior

This button will display the total number of RMS Shop Callbacks for the selected Group Branch. When this button is pressed, the Content Panels Account Table is refreshed to show data for RMS Shop callbacks for the selected Group Branch, and the renter and Contact Tables are cleared. Both the Perform Callbacks and Update Message Status buttons are visible, but disabled.

#### 2.1.15.2 Validation

This field is only displayed for an RMS employee.

#### 2.1.15.3 Business Exceptions

None specified at this time.

#### 2.1.15.4 System Exceptions

None specified at this time.

#### 2.1.16 *RMSBillToTotal*

##### 2.1.16.1 Behavior

This button will display the total number of RMS Bill-To Callbacks for the selected Group Branch. When this button is pressed, the Content Panels Account Table is refreshed to show data for RMS Bill-To callbacks for the selected Group Branch, and the renter and Contact Tables are cleared. Both the Perform Callbacks and Update Message status buttons are visible, but disabled.

##### 2.1.16.2 Validation

This field is only displayed for an RMS employee.

##### 2.1.16.3 Business Exceptions

None specified at this time.

##### 2.1.16.4 System Exceptions

None specified at this time.

#### 2.1.17 *RMSRenterTotal*

##### 2.1.17.1 Behavior

This button will display the total number of RMS Renter Callbacks for the selected Group Branch. When this button is pressed, the Content Panel's Renter Table is refreshed to show data for RMS Renter callbacks for the selected Group Branch. Only the Renter Table is visible and only the Perform Callbacks button is visible, but disabled.

##### 2.1.17.2 Validation

This field is only displayed for an RMS employee.

##### 2.1.17.3 Business Exceptions

None specified at this time.

##### 2.1.17.4 System Exceptions

None specified at this time.

#### 2.1.18 *Account Table*

This table contains all accounts contained in all callbacks for the selected Group Branch and Callback Type. When an account is selected, the contacts table is loaded with all the contacts for that account that has a callback for that Group Branch and Callback Type. The Perform Callbacks Button is disabled.

#### 2.1.18.1 Name

##### 2.1.18.1.1 Behavior

This output only field contains the name of the account.

##### 2.1.18.1.2 Validation

None specified at this time.

##### 2.1.18.1.3 Business Exceptions

None specified at this time.

##### 2.1.18.1.4 System Exceptions

None specified at this time.

#### 2.1.18.2 Telephone Number

##### 2.1.18.2.1 Behavior

This output only field contains the telephone number of the account.

##### 2.1.18.2.2 Validation

None specified at this time.

##### 2.1.18.2.3 Business Exceptions

None specified at this time.

##### 2.1.18.2.4 System Exceptions

None specified at this time.

#### 2.1.18.3 Number Of Calls

##### 2.1.18.3.1 Behavior

This output only field contains the number of calls that particular account has for the selected Group, Branch, and Callback Type.

##### 2.1.18.3.2 Validation

None specified at this time.

##### 2.1.18.3.3 Business Exceptions

None specified at this time.

##### 2.1.18.3.4 System Exceptions

None specified at this time.

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#### 2.1.18.4 Left Messages

##### 2.1.18.4.1 Behavior

This output only field contains the number of messages left for that particular account for the selected Group, Branch, and Callback Type.

##### 2.1.18.4.2 Validation

None specified at this time.

##### 2.1.18.4.3 Business Exceptions

None specified at this time.

##### 2.1.18.4.4 System Exceptions

None specified at this time.

#### 2.1.18.5 Account No.

##### 2.1.18.5.1 Behavior

This output only field contains the account number for the Account.

##### 2.1.18.5.2 Validation

None specified at this time.

##### 2.1.18.5.3 Business Exceptions

None specified at this time.

##### 2.1.18.5.4 System Exceptions

None specified at this time.

#### 2.1.18.6 Address

##### 2.1.18.6.1 Behavior

This output only field contains the account's address.

##### 2.1.18.6.2 Validation

None specified at this time.

##### 2.1.18.6.3 Business Exceptions

None specified at this time.

##### 2.1.18.6.4 System Exceptions

None specified at this time.

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### 2.1.19 Contact Table

This table contains all contacts for the selected account contained in all callbacks for the selected Group Branch and Callback Type. When a contact is selected, the renter table is loaded with all the renter and contracts for that account and contact that has a callback for that Group Branch and Callback Type. The Perform Callbacks Button is disabled.

#### 2.1.19.1 Name

##### 2.1.19.1.1 Behavior

The name of the contact.

##### 2.1.19.1.2 Validation

None specified at this time.

##### 2.1.19.1.3 Business Exceptions

None specified at this time.

##### 2.1.19.1.4 System Exceptions

None specified at this time.

#### 2.1.19.2 Telephone Number

##### 2.1.19.2.1 Behavior

The telephone number of the contact.

##### 2.1.19.2.2 Validation

None specified at this time.

##### 2.1.19.2.3 Business Exceptions

None specified at this time.

##### 2.1.19.2.4 System Exceptions

None specified at this time.

#### 2.1.19.3 Number Of Calls

##### 2.1.19.3.1 Behavior

The number of calls for that Contact for the selected Group Branch and Callback Type.

##### 2.1.19.3.2 Validation

None specified at this time.

##### 2.1.19.3.3 Business Exceptions

None specified at this time.

2.1.19.3.4 System Exceptions

None specified at this time.

2.1.19.4 Left Messages

2.1.19.4.1 Behavior

The number of messages left for that contact for the selected Group Branch and Callback Type

2.1.19.4.2 Validation

None specified at this time.

2.1.19.4.3 Business Exceptions

None specified at this time.

2.1.19.4.4 System Exceptions

None specified at this time.

2.1.20 Renter Table

This table contains information about Renters, Contracts, and Callbacks for the selected Group, Branch, Account, Callback Type and Contact. Multiple Renters' can be selected. When one or more rows in the Renter table are selected, the Perform Callbacks button becomes enabled to perform a callback except for Automated, Fax, and Consolidated Callback Methods.

2.1.20.1 Name

2.1.20.1.1 Behavior

The name of the renter

2.1.20.1.2 Validation

None specified at this time.

2.1.20.1.3 Business Exceptions

None specified at this time.

2.1.20.1.4 System Exceptions

None specified at this time.

2.1.20.2 Vehicle

2.1.20.2.1 Behavior

The Year Make Model and Color of the Vehicle Rented? Or the Renter's Vehicle in the Shop?



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2.1.20.2.2 Validation

None specified at this time.

2.1.20.2.3 Business Exceptions

None specified at this time.

2.1.20.2.4 System Exceptions

None specified at this time.

2.1.20.3 Claim/Pol/PO/RO

2.1.20.3.1 Behavior

The Claim Number, Policy Number, Purchase Order Number, or Repair Order Number.

2.1.20.3.2 Validation

None specified at this time.

2.1.20.3.3 Business Exceptions

None specified at this time.

2.1.20.3.4 System Exceptions

None specified at this time.

2.1.20.4 Date of Loss

2.1.20.4.1 Behavior

The date the renter's vehicle was damaged.

2.1.20.4.2 Validation

None specified at this time.

2.1.20.4.3 Business Exceptions

None specified at this time.

2.1.20.4.4 System Exceptions

None specified at this time.

2.1.20.5 Primary Reason

2.1.20.5.1 Behavior

The reason for the callback.

2.1.20.5.2 Validation

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None specified at this time.

2.1.20.5.3 Business Exceptions

None specified at this time.

2.1.20.5.4 System Exceptions

None specified at this time.

2.1.20.6 Today's Action

2.1.20.6.1 Behavior

The action required for this callback.

2.1.20.6.2 Validation

None specified at this time.

2.1.20.6.3 Business Exceptions

None specified at this time.

2.1.20.6.4 System Exceptions

None specified at this time.

2.1.20.7 Days Outstanding

2.1.20.7.1 Behavior

The number of days since the date for which the callback was generated.

2.1.20.7.2 Validation

None specified at this time.

2.1.20.7.3 Business Exceptions

None specified at this time.

2.1.20.7.4 System Exceptions

None specified at this time.

2.1.20.8 Contract Number

2.1.20.8.1 Behavior

The contract number for the callback.

2.1.20.8.2 Validation

None specified at this time.

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2.1.20.8.3 Business Exceptions

None specified at this time.

2.1.20.8.4 System Exceptions

None specified at this time.

**2.2 Renter Content Panel**

**2.2.1 Group & Branch**

See Group and Branch in the Bill-To and Shop Content Panel.

**2.2.2 Renter Table**

This table contains information about Renters, Contracts, and Callbacks for the selected Group, Branch, Account, Callback Type and Contact. Multiple Renters' can be selected. When one or more rows in the Renter table are selected, the Perform Callbacks button becomes enabled to perform a callback except for Automated, Fax, and Consolidated Callback Methods.

**2.2.2.1 Name**

The Renter's name.

2.2.2.1.1 Behavior

2.2.2.1.2 Validation

None specified at this time.

2.2.2.1.3 Business Exceptions

None specified at this time.

2.2.2.1.4 System Exceptions

None specified at this time.

**2.2.2.2 Current Amount Due**

2.2.2.2.1 Behavior

The amount owed by the renter.

2.2.2.2.2 Validation

None specified at this time.

2.2.2.2.3 Business Exceptions

None specified at this time.

2.2.2.2.4 System Exceptions

None specified at this time.

### 2.2.2.3 Payment Type

#### 2.2.2.3.1 Behavior

The type of payment the renter used when picking up the vehicle.

#### 2.2.2.3.2 Validation

None specified at this time.

#### 2.2.2.3.3 Business Exceptions

None specified at this time.

#### 2.2.2.3.4 System Exceptions

None specified at this time.

### 2.2.2.4 Home Phone Number

#### 2.2.2.4.1 Behavior

The home phone number for the renter

#### 2.2.2.4.2 Validation

None specified at this time.

#### 2.2.2.4.3 Business Exceptions

None specified at this time.

#### 2.2.2.4.4 System Exceptions

None specified at this time.

### 2.2.2.5 Primary Reason

#### 2.2.2.5.1 Behavior

The reason for the callback.

#### 2.2.2.5.2 Validation

None specified at this time.

#### 2.2.2.5.3 Business Exceptions

None specified at this time.

#### 2.2.2.5.4 System Exceptions

None specified at this time.

#### 2.2.2.6 Today's Action

##### 2.2.2.6.1 Behavior

The action required for today's callback.

##### 2.2.2.6.2 Validation

None specified at this time.

##### 2.2.2.6.3 Business Exceptions

None specified at this time.

##### 2.2.2.6.4 System Exceptions

None specified at this time.

#### 2.2.2.7 Days Outstanding

##### 2.2.2.7.1 Behavior

The number of days since the date for which the callback was generated.

##### 2.2.2.7.2 Validation

None specified at this time.

##### 2.2.2.7.3 Business Exceptions

None specified at this time.

##### 2.2.2.7.4 System Exceptions

None specified at this time.

#### 2.2.2.8 Contract Number

##### 2.2.2.8.1 Behavior

The contract number the callback is for.

##### 2.2.2.8.2 Validation

None specified at this time.

##### 2.2.2.8.3 Business Exceptions

None specified at this time.

##### 2.2.2.8.4 System Exceptions

None specified at this time.

## 2.3 Message Status Dialog

This dialog is displayed when the Update Message Status button is pressed.

### 2.3.1 Left Message

#### 2.3.1.1 Behavior

This button could be selected if a message was left regarding the selected callback.

#### 2.3.1.2 Validation

None specified at this time.

#### 2.3.1.3 Business Exceptions

None specified at this time.

#### 2.3.1.4 System Exceptions

None specified at this time.

### 2.3.2 No Answer

#### 2.3.2.1 Behavior

This button could be selected if an attempt was made for a callback but there was no answer.

#### 2.3.2.2 Validation

None specified at this time.

#### 2.3.2.3 Business Exceptions

None specified at this time.

#### 2.3.2.4 System Exceptions

None specified at this time.

### 2.3.3 Contact will call back

#### 2.3.3.1 Behavior

This button could be selected if someone was contacted and indicated that they will callback at a later time.

#### 2.3.3.2 Validation

None specified at this time.

#### 2.3.3.3 Business Exceptions

None specified at this time.

#### 2.3.3.4 System Exceptions

None specified at this time.

### 2.3.4 Person Contacted

#### 2.3.4.1 Behavior

The person who was contacted when a message was left.

#### 2.3.4.2 Validation

None specified at this time.

#### 2.3.4.3 Business Exceptions

None specified at this time.

#### 2.3.4.4 System Exceptions

None specified at this time.

### 2.4 Rules

1. A user must be able to select any Branch within their Group for which to view Callbacks for the selected Branch.
2. Upon initial entry to Callback Summary the default Group and Branch will be for the requesting terminal's Group and Branch and the "Manual" Callback Method and "Shop" Callback Type will be selected on the Navigation Bar.
3. Callbacks must be grouped into Callback Methods to indicate how the user should perform the callback.
4. Callbacks must be grouped into Callback Types to indicate to whom the callback should be performed.
5. Applicable Callback Types should be listed under the Callback Methods that can be used to perform a callback of this type.
6. Shop Callbacks can be performed by the following Callback Methods:
  - Manual
  - Automated
  - Fax
  - Consolidated
7. Bill To Callbacks can be performed by the following Callback Methods:
  - Manual
  - Automated
  - Fax
  - Consolidated
8. Renter Callbacks can be performed by the following Callback Methods:
  - Manual
9. The user must be able to select a single Callback Type for a Callback Method and view all contracts associated with that selected Callback Type and method.
10. The total number of callbacks needing to be performed by a Callback Method, for a particular group/branch, should be displayed for each Callback Method.
11. The total number of callbacks needing to be performed to a particular Callback Type, for a particular group/branch, should be calculated and displayed for each Callback Type for each Callback Method.
12. The number of calls should only calculate the callbacks that are in an "incomplete" status for the particular Callback Method or the Callback Type under a Callback Method, for a particular group/branch.
13. The number of calls column should be re-calculated every time the user selects to refresh the data on the screen or leaves the window and returns back to the window so they can see their updates to the callbacks immediately.
14. When should the server go back to corporate when refreshing; every time a refresh is requested or only when a message has been sent from corporate that some event has occurred that affects the Callback summary list?
15. When the requesting terminal is from a Callback Center Group and Branch; those Callbacks that are consolidated to this Group and Branch should be grouped to the appropriate Callback Type under the "Manual" Callback Method.
16. When the requesting terminal is from a Renting Group and Branch; those Callbacks where the requesting Group

and Branch is the owning Group/Branch for the Contract that has a Callback record, that are consolidated to another Group and Branch should be grouped to the appropriate Callback Type under the "Consolidated" Callback Method.

## 2.5 Security

1. For security checks we will use the architecture security framework to determine if a user can access a reservation/contract based on their access levels.
2. We will need an application security check (separate from the security framework) for certain branches to determine if they can edit certain contracts, that are for a country other than theirs, for which they are responsible for performing the callbacks. (i.e. Canada branches may be responsible for Cars that are rented from a Florida branch but the Canada branch is required to do the callbacks for the Bill To account). The branch will need the ability to edit the contract regardless of how they select the contract. A solution may be to have a generic Kiosk Id, where the id allows editing of contracts across countries.

## 2.6 Questions

3. What happens when the user clicks on the Fax, Automated, or Consolidated buttons? Should we show the same content panel, or is there different information displayed for the other methods of callbacks.
4. Does the Update Message Status button belong to an entire account, a contact, or a particular callback? If it belongs to a particular callback (or set of selected callbacks) the Update Message Status button should be underneath the Renter Table. If it belongs to a particular contact, the Update Message Status button should be under the Contact table.
5. What is the formula for Days Outstanding?
6. What is the Vehicle in the Renter's table? Is it the Renter's Vehicle in the Shop? Is it the Rented Vehicle?





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## **Addendum A**

### *Supplementary Control Behavior*

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Spec - Callback Summary.doc

	Version: <1.0>
ECARS 2	Date: <dd/mm/yy>
<document identifier>	

## 1. Expandable Table

### 1.1 Screen Shots

Enterprise® ECARS Application - Microsoft Internet Explorer provided by Enterprise R... ARMS

File Reservation Contracts Callbacks Rates Tools Help

Method (Calls) Manual (71) Shop (1) BillTo (65) Renter (5) Automated (0) Shop (0) BillTo (0) Fax (0) Shop (0) BillTo (0) Consolidated (4) Shop (2) BillTo (2)

**Manual Callbacks - BillTo**

Group: 01 - ST LOUIS Branch: LADUE RENTAL 0101 Search

Customer

Name	Telephone No.	No of Calls	Left Messages	Customer No.	Address
SAFECO INS-ST.		12	1	SAF0102	P. O. BOX 66783 ST.
SHELTER INS-		1	0	SHE0102	P. O. BOX 3145 BALLWIN

Contact

Name	Telephone No.	No of Calls	Left Messages
-- All --		12	1
BATTISTA*RENEE D*	3149574643	1	0

Update Message Status

Renter

Name	Vehicle	Claim/Pol/PO/RO	Date of Loss	Primary Reason	Today's Action	Days Outstanding	Contract Number
NATALIA S AKOPYANTS		05A002740003	9/29/2000	Obtain Initial Authorization	Left Message	44	835950
CATHERINE		05A001381563	5/16/2000	Obtain Initial		44	702524

Perform Callbacks

Figure 4: Callback Summary with the table's normal size.

ECARS 2	Version: <1.0>
<document identifier>	Date: <dd/mmm/yy>

Enterprise® ECARS Application - Microsoft Internet Explorer provided by Enterprise R...

File Reservation Contracts Callbacks Rates Tools Help ARMS

Method (Calls) Manual (71) Shop (1) BillTo (65) Renter (5) Automated (0) Shop (0) BillTo (0) Fax (0) Shop (0) BillTo (0) Consolidated (4) Shop (2) BillTo (2)

Manual Callbacks - BillTo

Group: 01 - ST LOUIS Branch: LADUE RENTAL 0101 Search

Customer

Name	Telephone No.	No of Calls	Left Messages	Customer No.	Address
AMERICAN FAMILY-ST.		5	5	AMF0103	P. O. BOX 28408 ST
AMERICAN GENERAL-		6	3	AGF0101	7777 BONHOMME ST.
AMERICAN STATES-ST.		1	0	AMS0102	P.O. BOX 66783 ST.
BAVARIAN INC.**		1	0	G08799	8374 OLIVE ST. LOUIS
CNA INS-DOWNERS		1	0	CNA1501	1431 OPUS PLACE STE
FARMERS GRP-ST.		4	1	FAR0106	P. O. BOX 410919 ST.
FIREMAN'S FUND-ST.		4	2	FIR0101	727 CRAIG RD, P.O. BOX
LIBERTY MUTUAL-ST.		6	4	LMI0101	P O BOX 8509A ST LOUIS
NATIONWIDE-ST.		1	0	NAT0155	12101 WOODCREST ST.
PROGRESSIVE INS-ST.		2	1	PRO0101	11457 OLDE CABIN LANE,
PRUDENTIAL INS-		1	0	PRU0101	7390 S. LIVERPOOL ST
SAFECO INS-ST.		12	1	SAF0102	P. O. BOX 66783 ST.
SHELTER INS-		1	0	SHE0102	P. O. BOX 3145 BALLWIN
STATE FARM-ST.		6	0	STF0155	520 MARYVILLE CTR DR
STATE FARM-ST.		2	0	STF0113	P. O. BOX 550 ST. PETERS
TIG-INCCC VIRTUAL		1	1	CCC7699	P.O. BOX 543575
XEROX CONNECT**		2	2	GE0577	8161 CLAYTON RD ST.

Perform Callbacks

Figure 5: Callback Summary with the account table expanded.

ECARS 2	Version: <1.0>
<document identifier>	Date: <dd/mmm/yy>

Enterprise® ECARS Application - Microsoft Internet Explorer provided by Enterprise R... ARMS

File Reservation Contracts Callbacks Rates Tools Help

**Method (Calls)**

Manual (71) Shop (1) BillTo (65) Renter (5) Automated (0) Shop (0) BillTo (0) Fax (0) Shop (0) BillTo (0) Consolidated (4) Shop (2) BillTo (2)

**Manual Callbacks - BillTo**

Group: 01 - ST LOUIS Branch: LADUE RENTAL 0101 Search

Customer

Name	Telephone No.	No of Calls	Left Messages	Customer No	Address
SAFECO INS-ST.		12	1	SAF0102	P. O. BOX 66783 ST.
SHELTER INS-		1	0	SHE0102	P. O. BOX 3145 BALLWIN

Contact

Name	Telephone No.	No of Calls	Left Messages
-- All --		12	1
BATTISTA*RENEE D*	3149574643	1	0
EBERHARDT*JAN*	3149574418	1	0
JUSTVIG*MICHAEL*	3149095990	2	1
KASDEN*DENISE A.*	8008431487	1	0
LAWSON*LISA A.*	3149574643	1	0
MALONEY*CATHERINE*	3149577052	1	0
MUELLER*RYAN*	8885575010	1	0
PISKORSKI*ANGELA*	3149095472	1	0

Perform Callbacks

Figure 6: Callback Summary with the contact table expanded.

ECARS 2	Version: <1.0>
<document identifier>	Date: <dd/mmm/yy>

Enterprise® ECARS Application - Microsoft Internet Explorer provided by Enterprise R... ARMS

File Reservation Contracts Callbacks Rates Tools Help

**Method (Calls)**

Manual (71)

Shop (1)

BillTo (65)

Renter (5)

Automated (0)

Shop (0)

BillTo (0)

Fax (0)

Shop (0)

BillTo (0)

Consolidated (4)

Shop (2)

BillTo (2)

**Manual Callbacks - BillTo**

Group: 01 - ST LOUIS Branch: LADUE RENTAL 0101 Search

Renter

Name	Vehicle	Claim/Pol/PO/RO	Date of Loss	Primary Reason	Today's Action	Days Outstanding	Contract Number
NATALIA S AKOPYANTS		05A002740003	9/29/2000	Obtain Initial Authorization	Left Message	44	835950
CATHERINE BRAY		05A001381563	5/16/2000	Obtain Initial Authorization		44	702524
STEFANY BROT		05A002930348	10/18/2000	Obtain Initial Authorization		44	853152
MELISSA DAVIS		05A002830976	10/7/2000	Obtain Initial Authorization		44	856861
ROBERT DIXON III	1999 HONDA	05A001571153	6/3/2000	Obtain Initial Authorization		44	720073
CATHY DUNKLE		05A002710472	9/26/2000	Obtain Initial Authorization		44	842730
THEODORE R MARTIN		05A002210725	8/8/2000	Obtain Initial Authorization		44	846205
COURTNEY & KARE PITKIN		05A002950310	10/21/2000	Obtain Initial Authorization		44	855533
BRICE SMITH		05A002621271	8/30/2000	Obtain Initial Authorization		44	842002
RICHARD TRAVERS		05A002902418	10/15/2000	Obtain Initial Authorization		44	859792
JAMES		05A002920294	10/17/2000	Obtain Initial Authorization		44	857649

Figure 7: Callback Summary with the renter table expanded.

## 1.2 Behavior

### 1.2.1 Overview

The expandable table is used to give the user the option to see a longer list of data to select from or view. This is similar to the way a combo box works. When the user clicks the + button, the table expands as large as it can without losing the vertical scroll bar. The table remains expanded until the user clicks the - button, or an item is selected. The expandable table should expand down if space is sufficient, however, it may expand up if there is no room below the table as in Figure 7.

Open Ticket

Use Cases				
File Edit View Help				
Name	Size	Type	Modified	
401 Additional Driver Insurance Info	90KB	Microsoft Word Document	12/20/01 12:00 PM	
402 Bill-To	131KB	Microsoft Word Document	12/20/01 11:52 AM	
403 Cash Qualification	110KB	Microsoft Word Document	12/20/01 11:58 AM	
404 Notes	95KB	Microsoft Word Document	12/20/01 12:04 PM	
405 Open Retail Rental Ticket Without Payment	339KB	Microsoft Word Document	12/20/01 12:08 PM	
406 Open Ticket Relieve Rates	71KB	Microsoft Word Document	12/20/01 12:10 PM	
407 Open Ticket Search	140KB	Microsoft Word Document	12/20/01 12:26 PM	
408 Referral Use Case.UCS	103KB	UCS File	12/7/01 6:54 PM	
409 Vehicle Shop Use Case - NEW	175KB	Microsoft Word Document	10/25/01 1:19 PM	
Object(s)			1.22MB	

cl(s) selected



	Version: 1.3
Rental Redesign/ECARS 2	Date: 12/21/01
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## Revision History

Date	Version	Description	Author
05/21/2001	1.0	Initial Draft	David Beebe
06/01/2001	1.1	Revisions based upon feedback from user review with Jon and Mary. 1. Employee Number is no longer an entry field: the system populates this field based upon the user in the active session. 2. OK/Exit renamed to "Save" 3. Selection of the Save option does not provide a feedback message to make sure they want to do that. 4. Moved validation of date to after the "Save" step. <i>(In HTML, Date Validation occurs after form submittal.)</i>	David Beebe
06/26/2001	1.2	Added (Blank) as an option for the following fields: <ul style="list-style-type: none"> <li>• Liability</li> <li>• Assigned Risk</li> <li>• Lienholder Policy</li> </ul>	Dave Beebe
06/28/2001	1.3	Revisions to match the Screen Action Spec document. 1. Removed the employee number gathered insurance information field. 2. Moved the insurance company employee that verified insurance information field. 3. Switched order of Comprehensive Deductible and Collision Deductible fields. 4. Removed Special Requirement that Employee Number field is available for edit.	David Beebe



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## Use Case Specification: Enter Renter's/Additional Driver's Insurance Information

### 1. Enter Renter's/Additional Driver's Insurance Information Use Case

#### 1.1 Brief Description

This use case will describe the interaction that occurs between a user and the system when the user inputs and selects details pertaining to the insurance information about a person who is a renter or additional driver.

### 2. Flow of Events

#### 2.1 Basic Flow

##### 2.1.1 Insurance Detail Area

The Enter Renter's/Additional Driver's Insurance Information Use Case begins when the system displays the area for entry and selection of insurance information about the person who is a renter or additional driver. The fields in this area are:

##### Information about the Insurance Company

- Carrier
- Agent
- Phone Number
- Name of Insurance Company Contact
- Policy Number
- Expiration Date

##### Information about the renter's or the additional driver's insurance

- Comprehensive Deductible
- Collision Deductible
- Liability?
  - (Blank)
  - Yes
  - No
- Assigned Risk?
  - (Blank)
  - Yes
  - No
- Lienholder Policy?
  - (Blank)
  - Yes
  - No

##### 2.1.2 Option to Cancel / Exit

The system displays the option for the user to Cancel/Exit. At any point during the entry of insurance information the user could decide to cancel out of the entry process at which time the use case would continue at alternate flow Cancel/ Exit.

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### 2.1.3 Option to Save

The system displays the option to Save. At any point during the entry of insurance information the user could decide to Save at which time the use case would continue at basic flow Save.

### 2.1.4 Company and Insurance Detail Information Area Entry

The user can enter information in the following fields: the name of the Carrier, the name of the Agent, Phone Number, Insurance Company Contact, Policy Number, Expiration Date, the Collision Deductible amount and the Comprehensive Deductible amount. The user can also select the available choices for Liability, Assigned Risk, and Lienholder Policy. There are no default values for any of the above fields.

### 2.1.5 Select Save Option

The user selects the option to Save.

### 2.1.6 Validation of Date

The system validates the value in the Expiration Date field. If the Date value is not valid because it does not exist (for example 02/30/02) the use case continues at alternate flow Invalid Date. If the Date value is not valid because the Expiration Date is prior to the current date the use case continues at alternate flow Expired Policy Date.

### 2.1.7 Validation of Information Entry

The system validates that if information is entered in any one of the following fields, that all of the other fields listed also have information entered in them:

- Carrier
- Insurance Company Contact
- Policy Number
- Expiration Date
- Collision Deductible
- Comprehensive Deductible
- Liability: Yes/No

If the system determines that any of the above fields are missing information, the system will present the user with a feedback message as to what fields are not filled to complete Insurance Information. The system will display the option for the user to proceed back to Company and Insurance Detail Information Area Entry in the basic flow to complete entry.

### 2.1.8 Save

The system saves all the information entered and selected in the fields of the of this use case flow. This would be:

- Carrier
- Agent
- Phone Number
- Insurance Company Contact
- Policy Number
- Expiration Date
- Comprehensive Deductible
- Collision Deductible

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- Liability?: (Blank).Yes. No
- Assigned Risk?: (Blank).Yes. No
- Lienholder Policy?: (Blank).Yes. No

#### 2.1.9 End

The Use Case ends.

## 2.2 Alternative Flows

### 2.2.1 Cancel / Exit

2.2.1.1 The user selects the option to Cancel / Exit.

2.2.1.2 The system displays a feedback message warning that the insurance data will be lost if the user selects to Cancel / Exit.

2.2.1.3 The system displays the following options:

- Yes: to exit and lose data.
- No: return to the use case.

(The default option will be No: return to the use case.)

2.2.1.4 The user selects Yes the use case ends. If the user selects No, then continue in basic flow at the point where the user selected to Cancel / Exit.

### 2.2.2 Invalid Date

2.2.2.1 The system displays a feedback message that the Date is invalid.

2.2.2.2 The system prompts the user to correct the Date that is invalid.

2.2.2.3 The user selects to correct the Date and the use case proceeds back to Company and Insurance Detail Information Area Entry in the basic flow.

### 2.2.3 Expired Policy Date

2.2.3.1 The system displays a feedback message that the policy has expired.

2.2.3.2 The system prompts the user to :

- Correct the policy expiration date.
- Exit the Insurance Information Entry process.

2.2.3.3 If the user selects to change the expiration date the use case proceeds back to Company and Insurance Detail Information Area Entry in the basic flow. If the user selects to exit the open ticket process the use case continues at alternate flow Cancel / Exit.

## 3. **Special Requirements**

## 4. **Pre-Conditions**

A user is already authorized through a login process to access the panel that is necessary to:

- Create or edit a reservation.

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- Open, edit or close a rental ticket.

## 5. Post-Conditions

## 6. Extension Points

## 7. Questions

**Question:** In the Employee Approval of the Renter's Insurance Information area should there be further security? (for example: update code). Or can the user just input the employee number and have the system save it as long as it is a valid employee?

**Answer:** No further security is needed. The employee number information will be automatically populated into the correct field. This field is display only and the information in it cannot be changed.

**Question:** What European requirements are there?

**Answer:** Jon Jouris has indicated there could be translations for the U.K., Germany etc. Fields could be eliminated or labels could be changed.

As of 06/06/2001 an electronic copy of this document had been sent to Jon Jouris so that he can pass it on to the appropriate European personnel for feedback. #

	Version: <2.1>
Open Retail Ticket without Payment	Date: <22 August 2001>

# **Open Retail Ticket without Payment Use Case Specification: Bill-to Version 2.0**

	Version: <2.1>
Open Retail Ticket without Payment	Date: <22 August 2001>

## Revision History

Date	Version	Description	Author
12 July 2001	1.0	First draft	Maribeth Concannon
20 July 2001	2.0	Final draft	Maribeth Concannon
22 August 2001	2.1	Updates per changes made during SAS reviews	Maribeth Concannon

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Open Retail Ticket without Payment	Date: <22 August 2001>

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## Use Case Specification: Bill-to

### 1. Bill-to

#### 1.1 Brief Description

This use case describes the "Bill-to process" within the context of the ticket or the reservation. The "Bill-to process" is limited here to adding and deleting an account number as a Bill-to, and adding, changing, extending and deleting an authorization.

This use case will encompass all of the requirements that are relevant from ECARS 1.0 as well as those from VRS which are deemed part of the 1<sup>st</sup> phase of ECARS 2.0. This use case only pertains to non-ARMS transactions.

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## 2. Flow of Events

### 2.1 Basic Flow

#### 2.1.1 Add a Bill-to

- 2.1.1.1 The user navigates, within the Ticket or the Reservation, to the Bill-to area.
- 2.1.1.2 The system allows the user to indicate who will be billed.
- 2.1.1.3 The user can search for an account by name or s/he can enter the account number directly.
- 2.1.1.4 If the user elects to search for the account, the system will first provide a list of the accounts already in use on the ticket or reservation (if applicable) and provide a list of the branch's most commonly used accounts, as determined by the criteria in the branch description in TX01. If the user elects to use an account not in this list, they can search across all of the accounts on file .
- 2.1.1.5 If there is no account in the system for the intended bill-to, see alternative flow: Account not on file. If the user elects to enter the account number without search, the system must validate the account before proceeding .
- 2.1.1.6 The user selects a contact . If the contact is not found, the user elects to add one and enters the contact's full name, phone number and phone number. Either the first name or last name is required. This is saved on the ticket / reservation, as well as being added as a contact for the account.
- 2.1.1.7 The user must select an authorization status.
- 2.1.1.8 System logs the details in the "Notes".
- 2.1.1.9 Use Case Ends

### 2.2 Alternative Flows

#### 2.2.1 Remove a Bill-to

- 2.2.1.1 The user navigates, within the Ticket or the Reservation, to the Bill-to area.
- 2.2.1.2 The user indicates that s/he wishes to remove a Bill-to.
- 2.2.1.3 The user selects the Bill-to account number which s/he wishes to remove from among the bill-tos on the ticket or reservation. Any bill-to on the ticket which has at least one ARMS authorization associated to it cannot be removed and therefore shouldn't be presented to the user as an option.
- 2.2.1.4 The system displays to the user all of the details of any authorizations associated with the Bill-to for that ticket or reservation along with the option to cancel their choice.
- 2.2.1.5 User elects to continue. If they elect to cancel, the use case ends .
- 2.2.1.6 The system removes the bill-to from the ticket or reservation as well as any authorizations and all required billing information associated to the bill-to and logs the details in the "Notes".
- 2.2.1.7 If there are other Bill-tos on the ticket or reservation, and they are a higher number bill-to, then they will be changed to a lower number. (For example, if Bill-to One is Smith Insurance and Bill-to Two is Brown Auto Body, and the user removes Smith Insurance from the reservation/ticket, then Brown Auto Body becomes Bill-to One.)
- 2.2.1.8 The use case ends.
- 2.2.2 Add authorization details  
The user navigates, within the Ticket or the Reservation, to the Bill-to area .  
The user indicates that s/he wishes to add an authorization.

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The system presents the user with the following fields:

- Authorization status (Authorized, Pending Authorization, Declined, Terminated, Reimbursed, Pending Call at Open)
- Daily amount of authorization
- Item(s) authorized
- Beginning date and time authorized
- Ending date and time authorized
- Final date of authorization (a.k.a. "Last Day")
- Person from the bill-to organization who gave the authorization.
- Maximum amount of authorization
- Maximum number of days of authorization
- "All charges" authorization
- Information required by the bill-to (may be limited by legacy to the existing text fields for the Claim/PO/RO and Insured Name fields).

In order to add an authorization, the user must change the authorization status to "Authorized" and enter the required information, as determined by the situation. (See add daily authorization, add authorization maximums, flat authorization, last day and required information for the details.)

The system automatically enters the details of the authorization into the reservation or ticket notes detailing the Enterprise employee who performed the authorization as well as all of the associated details.

The use case ends.

#### 2.2.2.1 Add daily authorization

The user indicates that s/he wishes to add a daily authorization.

User indicates the following:

The amount per day that is authorized.

The item or items to which that amount is to be applied.

Whether or not that amount includes tax or is "plus tax" which allows the tax(es) to be added to the authorization.

The date the authorization is effective. If the billing cycle is 24 hour, then the time is also required. These should default to the date and time that the ticket was opened, or to the date and time of the reservation (if available).

The end date of the authorization or the number of days of the authorization. If the number of days is indicated, then the system will determine the end date. If a 24 hour billing cycle, then the time is also required.

The name of the person from the bill-to account who made the authorization.

#### 2.2.2.2 Add authorization maximums

The user indicates that s/he wishes to add an authorization maximum.

User indicates the following:

The maximum amount that the bill-to can be billed, the maximum number of days that they can be billed, or both. If they indicate both, they system will apply whichever is the lesser).

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The name of the person from the bill-to account who set the maximum.

NOTE: The maximum amount is a flat maximum - there will be no option to indicate an amount + tax, etc...

### 2.2.2.3 Last Day

User indicates the following:

The date beyond which no charges may be applied to the bill-to .

The name of the person from the bill-to account who set the final date.

### 2.2.3 Change Authorization Amount

2.2.3.1 This allows the user to change an authorization which has already been entered.

2.2.3.2 The user navigates, within the Ticket or the Reservation, to the Bill-to area.

2.2.3.3 The user indicates that s/he wishes to change the amount of an authorization for Bill-to.

2.2.3.4 If the user wants to change an existing amount for dates which have already been authorized s/he indicates the authorization that s/he wishes to change and changes it. Because ARMS authorizations cannot be changed by the user, the system should not make any ARMS authorizations available to them.

2.2.3.5 The system automatically enters the details of the authorization into the reservation or ticket notes detailing the Enterprise employee who performed the authorization as well as all of the associated details.

2.2.3.6 The use case ends.

### 2.2.4 Extend Authorization

2.2.4.1 The user navigates, within the Ticket or the Reservation, to the Bill-to area.

2.2.4.2 The user indicates that s/he wishes to extend an authorization for a specific Bill-to. The user should not have any authorizations available to them which are ARMS authorizations.

2.2.4.3 The system presents the user with the end date of the most recent authorization amount and allows them to change it.

2.2.4.4 If the user wishes to change the authorization amount, go to the Change Authorization alternative flow.

2.2.4.5 The user changes the end date to a date later than the date already in the authorization. If they enter a date which is the same as the date already entered, then the use case ends.

2.2.4.6 If the user attempts to change an end date for an authorization which has been "Last Dayed", then the system presents the user with an informational message and asks them to confirm the change. If they confirm, then the Last Day Date is updated accordingly. The authorization status remains "Terminated".

2.2.4.7 The system automatically enters the details of the authorization into the reservation or ticket notes detailing the Enterprise employee who performed the authorization as well as all of the associated details.

2.2.4.8 The use case ends.

### 2.2.5 "Last Day" authorization

2.2.5.1 The user navigates, within the Ticket or Reservation, to the Bill-to area.

2.2.5.2 The system provides the option to indicate that the end date of the authorization is final and cannot be changed. If the authorization is an ARMS authorization, this option is not available

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and the use case ends.

2.2.5.3 The user elects to make the end date of the authorization the LAST DAY.

2.2.5.4 The system automatically changes the authorization status to "Terminated" and enters the details of the authorization into the reservation or ticket notes detailing the Enterprise employee who performed the LAST DAY authorization as well as all of the associated details.

2.2.5.5 The use case ends.

## 2.2.6 Remove Authorization

2.2.6.1 The user navigates, within the Ticket or Reservation, to the Bill-to area.

2.2.6.2 The user indicates that s/he wishes to remove a single authorization for a specific Bill-to. If the authorization is an ARMS authorization, this option is not available and the use case ends.

2.2.6.3 The system presents an option to the user to cancel their choice, along with all of the details of the authorization they selected. The details include which item(s) the authorization applies to and the amount and dates covered.

2.2.6.4 User elects to continue. If they elect to cancel, the use case ends.

2.2.6.5 If the authorization they selected to remove is the only one on the ticket or reservation for that Bill-to, then the system requires changes the authorization status to "Declined" but allows the user to change the authorization status to "Pending".

2.2.6.6 The system automatically enters the details of the authorization removal into the reservation or ticket notes detailing the Enterprise employee who performed the authorization as well as all of the associated details.

2.2.6.7 The use case ends.

## 2.2.7 Remove all authorizations for a Bill-to Account

2.2.7.1 The user navigates, within the Ticket or Reservation, to the Bill-to area.

2.2.7.2 The user indicates that s/he wishes to remove all authorizations for a specific Bill-to by changing the authorization status to "Declined". If the authorization is an ARMS authorization, this option is not available and the use case ends.

2.2.7.3 The system presents an option to the user to cancel their choice, along with all of the details of the authorizations. The details include which item(s) the authorizations apply to and the amounts and dates covered.

2.2.7.4 User elects to continue. If they elect to cancel, the use case ends.

2.2.7.5 The system automatically enters the details into the reservation or ticket notes detailing the Enterprise employee who performed the authorization as well as all of the associated details.

2.2.7.6 The use case ends.

## 2.2.8 Account not on file

2.2.8.1 The user navigates, within the Ticket or Reservation, to the Bill-to area.

2.2.8.2 The user indicates that s/he wishes to bill an account which is not in the system.

2.2.8.3 The system presents fields to enter the name of the account, the billing address information, phone number and name of a contact for that account. All of the information is required. The address entry should follow the system standards which allow for the user to enter the zip code and address and have the system search for the appropriate city and state. If many city, state combinations are valid, the user should be allowed to select from them.

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2.2.8.4 The user completes all of the information. If they omit any part of the information and try to continue, the system provides a feedback message indicating which information is missing. The system allows the user to update those items.

2.2.8.5 The system does not add this account to the account database.

2.2.8.6 The system automatically enters the details of the addition of the "Not on file" account into the reservation or ticket notes detailing the Enterprise employee who performed the action as well as all of the associated details.

2.2.8.7 The use case ends.

## 2.2.9 Adding Required Billing Information

2.2.9.1 The user navigates, within the Ticket or Reservation, to the Bill-to area.

2.2.9.2 The user indicates that s/he wishes to add "Required Billing Information"

2.2.9.3 The user indicates the account for which they want to add or update the information. Any information associated with bill-tos on the ticket which have at least one ARMS authorization associated to it cannot be changed and therefore, those accounts shouldn't be available to the user.

2.2.9.4 The system makes the Claim/PO/RO and Insured Name fields available for edit.

2.2.9.5 If the account has listed at least one of these fields as required and/or that specific formatting is necessary, then the system indicates which field(s) is required and/or the format that the information must be in (if specified).

2.2.9.6 The user enters as much information as is available. (The information isn't required until the ticket is closed.)

2.2.9.7 The system automatically enters the details of the information, into the reservation or ticket notes detailing the Enterprise employee who performed the edit as well as all of the associated details.

2.2.9.8 The use case ends.

## 3. Special Requirements – Bill-to

### 3.1 Number of users

Only one user should be allowed to update authorization information on a ticket or reservation at a time.

Only one user should be allowed to add or remove bill-to account numbers on a ticket or reservation at a time.

### 3.2 Callbacks

Any update to authorizations should be taken into account by the callbacks engine in generating callbacks to renters and Bill-tos.

### 3.3 Help

If help text will be made available to the users, some explanation of why ARMS-authorized bill-tos are treated differently will be necessary.

### 3.4 Authorization by car class

When the user is adding an authorization amount, they must be allowed to look up the amount using a car class. Furthermore, if the retrieved rate is tiered, then the user must have the option either to select one of the rates or to indicate that the authorization is tiered and thereby associate all of the rates to the authorization.

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### 3.5 ARMS authorization

Only one ARMS authorized account can be on a ticket/reservation at a time.

If a bill-to account receives an ARMS authorization and it is not in the bill-to ONE position, it must be changed to bill-to one and the other bill-tos must follow it. Therefore, if bill-to one is **Joe's Body Shop** (non-AMRS) and bill-to two is **Allstate** (ARMS) and **Allstate** sends an initial ARMS authorization, it becomes bill-to one and **Joe's Body Shop** becomes bill-to two.

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#### 4. System Generated notes (as of 6 August, 2001)

Event	Note Text	When to generate in Reservation	When to generate in Open	Use Case/Screen
A Reservation becomes an open ticket after the reservation has already been created.	"Ticket Opened"		Create	Open
When a ticket is opened, the information in the preference field will be generated as a note	Any text within the preference field		Create	Open
When a ticket is opened, the text in the field, vehicle notes, will be generated as a note	Text in the field "Vehicle Notes"		Create	Open
A reservation is matched or unmatched to a Ticket	Reservation # "XXXXXXX" was (un) matched to Ticket # "XXXXXX".		Create/Edit	Open
A reservation is created	"Reservation Created"	Create		Create
The user marks the ARMS Status Dialog Box as "Renter Has Been Contacted"	"Renter Has Been Contacted" AND any text entered in the ARMS Notes field	Edit		Navigation/ ARMS Dialog Box
The user marks the ARMS Status Dialog Box as "Renter Has Not Been Contacted"	"Renter Has Been Contacted" AND any text entered in the ARMS Notes field	Edit		Navigation/ ARMS Dialog Box
The Reservation Pick-up date is changed	Pick-up Date "XX/XX/XXXX" was changed to "XX/XX/XXXX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Dates
The Reservation Pick-up time is changed	Pick-up Time "XX: XX" was changed to "XX: XX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Dates



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Event	Note Text	When to generate in Reservation	When to generate in Open	Use Case/Screen
The Reservation pick-up method is changed	Pick-up Method "XX" was changed to "XX".	Edit	Create (if selected in the Reservation) /Edit	Rates/Dates
The Reservation pick-up location is changed	Pick-up Location "XXXX" was changed to "XXXXX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Dates
The Reservation Return date is changed	Return Date "XX/XX/XXXX" was changed to "XX/XX/XXXX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Dates
The Reservation Return time is changed	Return Time "XX: XX" was changed to "XX: XX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Dates
The Reservation return method is changed	Return Method "XX" was changed to "XX".	Edit	Create (if selected in the Reservation) /Edit	Rates/Dates
The Rate Source and/or Account Number are changed	Rate Source "XXXXXX" was changed to "XXXXXX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Dates
The Rate Type is changed	Rate Type "XXXXX" was changed to "XXXXX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Dates

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Event	Note Text	When to generate in Reservation	When to generate in Open	Use Case/Screen
The Car Class is changed	Car Class "XXXX" was changed to "XXXX"	Edit	Create (if selected in the Reservation) /Edit	Rates/Dates
After a rate source and car class has been chosen, the user manually changes any of the values populated in the vehicle rate table.	What rate values were changed and what the old and new values are.	Create/Edit	Create/Edit	Rates/Dates
The Reservation return location is changed	Return Location "XXXX" was changed to "XXXX"	Edit	Create (if selected in the Reservation) /Edit	Pick-up Location
The Group or Branch of the Reservation pick-up location is changed	Pick-up Location "GPBR" was changed to "GPBR"	Edit	Create (if selected in the Reservation) /Edit	Pick-up Location
The Group or Branch of the Reservation return location is changed	Return Location "GPBR" was changed to "GPBR"	Edit	Create (if selected in the Reservation) /Edit	Pick-up Location
The system has populated the products area after a rate source has been chosen and the user manually changes any of the values.	What values were changed and what the old and new values are.	Create/Edit	Create/Edit	Products and Discounts
The user changes a tax or surcharge.	What values were changed and what the old and new values are.	Create/Edit	Create/Edit	Tax
The user changes the tax-exempt status.	Tax Exempt Status "XXXX" was changed to "XXXX"	Create/Edit	Create/Edit	Tax/Driver

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Event	Note Text	When to generate in Reservation	When to generate in Open	Use Case/Screen
The user chooses to "Rent" when a renter comes up "Renter Warning"	"Renter Warning overridden"	Create/Edit	Create/Edit	Basic Res/Driver
The user chooses to bypass the warning when a driver's age is either over 70. 21-24 or 18-20 years of age.	"Underage/Overage warning overridden"	Create/Edit	Create/Edit	Basic Res/Driver
The User changes any phone number of the renter or an additional driver.	What Values were changed and what the old and new values are.	Create (if populated by Driver search)/Edit	Create (if data exists from the reservation)/Edit	Basic Res/Driver
The User changes any renter or additional driver's first or last name	What values were changed and what the old and new values are	Create/Edit	Create/Edit	Basic Res/Driver
The user adds or deletes an additional driver	Driver "Last Name, First Name" was removed	Create/Edit	Create (if data exists from the reservation)/Edit	Basic Res/Driver
The user changes the Referral Account	Referral Account "XXXXXX" was changed to "XXXXXX"	Edit	Create (if data exists from the reservation)/Edit	Referral
The user changes the referral contact. (The referral account is the same)	Referral Contact "XXXXX" was changed to "XXXXX" for Referral Account "XXXXX"	Edit	Create (if data exists from the reservation)/Edit	Referral

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Event	Note Text	When to generate in Reservation	When to generate in Open	Use Case/ Screen
The user adds a "not on file" contact	Not on File Contact "First Name, Last Name" was added for Referral Account "XXXXXX".	Create/Edit	Create/Edit	Referral
The user changes the bill-to account.	Bill-to "XXXX" was changed to "XXXX".	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user changes the bill-to contact. (The Bill-to account is the same)	Bill-To Contact "XXXXXX" was changed to "XXXXX" for Bill-to account "XXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user adds a "not of file" bill-to contact.	Not on file contact "First Name Last Name" was added for Bill-to Account "XXXXXX"	Create/Edit	Create/Edit	Bill-To
The user changes the authorized by contact. (The Bill-to account is the same)	Authorized By "XXXXX" was changed to "XXXXX" for Bill-to Account "XXXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user changes the auth status. (The Bill-to account is the same)	The Authorization Status was changed from "XXXX" to "XXXXX" for Bill-to account "XXXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to

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Event	Note Text	When to generate in Reservation	When to generate in Open	Use Case/Screen
The user changes the auth %. (The Bill-to account is the same)	The Authorization % was changed from "XX" to "XX" for Bill-to Account "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user changes the Max Per day. (The Bill-to account is the same)	The Maximum Amount Per Day was changed from "XX" to "XX" for Bill-to Account "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user changes the Max Billable Amount (The Bill-to account is the same)	The Maximum Billable Amount was changed from "XX" to "XX" for Bill-to Account "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user changes the number of days. (The Bill-to account is the same)	The number of days was changed from "XX" to "XX" for Bill-to Account "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user changes either the Billing start date or billing start time (The Bill-to account is the same)	The Billing Start Date and Billing Start Time changed from "XXXXXXXX" to "XXXXXXXX" for Bill-to Account "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to

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Event	Note Text	When to generate in Reservation	When to generate in Open	Use Case/Screen
The user changes either the Billing end date or billing end time. (The Bill-to account is the same)	The Billing End Date and Billing End Time changed from "XXXXXXXX" to "XXXXXXXX" for Bill-to account "XXXXXX".	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user changes the daily rate. (The Bill-to account is the same)	The Daily Rate was changed from "XXXX" to "XXXX" for Bill-to account "XXXX".	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user changes the Authorized Car Class. (The Bill-to is the same)	The Authorized Car Class was changed from "XXXX" to "XXXX" for Bill-to account "XXXX".	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user changes the Plus Tax check box (The Bill-to account is the same)	What the check box was and what it was changed to	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user changes a product or service (The Bill-to is the same)	What Products were added or deleted and the amounts they were changed from and to.	Create/Edit	Create/Edit	Bill-to
The user adds a Not on File Bill-to	Not on File Account "XXXX" has been added as a Bill-to	Create/Edit	Create/Edit	Bill-to

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Event	Note Text	When to generate in Reservation	When to generate in Open	Use Case/Screen
The user changes the Ro/Po/Cl #. (The Bill-to is the same)	The RO/PO/CL # was changed from "XXXXXX" to "XXXXX" for Bill-to account "XXXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user changes the Claim type. (The Bill-to is the same)	The Claim Type was changed from "XXXXX" to "XXXXX" for Bill-to account "XXXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to
The user changes the insured's name.	The Insured's Name was changed from "XXXXXX" to "XXXXXX"	Edit	Create (if data exists from the reservation) /Edit	Bill-to

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## **5. Pre-Conditions**

### **5.1 User logged In**

The user must be logged in to the reservation or ticket system.

## **6. Post-Conditions**

### **6.1 None**

## **7. Extension Points**

### **7.1 None**

## **8. Questions**

### **8.1 Rate source**

How is adding a bill-to (or removing one) expected to impact the reservation or ticket's rate source? If no impact, should a message be provided to the user?

### **8.2 European requirements**

European requirements still need to be documented. When will these be available?

### **8.3 ARMS**

Can the user change any Bill-to information on an ARMS ticket?

### **8.4 System generated notes**

What details should be included in each note?

### **8.5 Name of authorizer**

Should this name be free-form text or should a list of contacts for the account be used? If a list is optimal, then do omit the contact for "Not on File" bill-tos?



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# Enterprise Rent-a-Car

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## Rental Redesign/ECARS 2.0 Use Case Specification: Enter Cash Qualification Information

Version 1.5

Rental Redesign/ECARS 2	Version: 1.5
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## Revision History

Date	Version	Description	Author
05/01/2001	1.0	Initial Draft	David Beebe
05/18/2001	1.1	1 <sup>st</sup> Revision (After break to work on Open Retail Rental Ticket without Payment Use Case)	David Beebe
05/23/2001	1.2	2 <sup>nd</sup> Revision	David Beebe
06/01/2001	1.3	Revisions based upon feedback from user review with Mary and Jon. <ol style="list-style-type: none"> <li>1. OK/Exit renamed to "Save"</li> <li>2. Removed Age from the Personal Information Area.</li> <li>3. Removed Insurance information from Rental Information Area.</li> <li>4. Removed "Other Items Received" from Rental Information Area.</li> <li>5. Added Employee Number/password authorization in the basic and alternate flows.</li> <li>6. Renter Information entered or changed in this form makes changes to the corresponding renter or additional driver information.</li> <li>7. Added Supervisor's Phone Number to the Rental Personal Information Area.</li> </ol>	David Beebe
06/07/2001	1.4	Revisions based upon feedback from Reservation team. <ol style="list-style-type: none"> <li>1. Combined Personal and Rental Information Areas into one.</li> <li>2. Removed the following fields: First Name, Last Name, Social Security Number, Date of Birth, Street Address, Zip/Postal Code, Country, City, State/Province, Other Ownership, Home Phone Number, Work Phone Number, Other Phone Number (and phone type), Previous Address #1 and #2, Previous Employment Information, Spouse Employment Information, Credit Check Information.</li> </ol>	David Beebe

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		<ol style="list-style-type: none"> <li>Also removed the corresponding Alternate Flows: No Match to Zip/Postal Code, Multiple City Results, Missing Name Information and Invalid Characters.</li> <li>Added the following fields: Insurance Company Name, Agent's Name, Agent's Phone Number and Policy Number.</li> <li>Password and Employee Name is only required when entering Cash Qualification Information during the Ticket process.</li> <li>Take out Supervisor's Phone Number. (Todd Shylanski 6/13/01)</li> </ol>	
06/21/2001	1.5	<ol style="list-style-type: none"> <li>Removed the following fields: Insurance Company Name, Agent's Name, Agent's Phone Number and Policy Number</li> <li>Added (Blank) as an option for the following fields: Ownership Rented Previously Do You Own a Car?</li> </ol>	David Beebe

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## Use Case Specification: Enter Cash Qualification Information

### 1. Enter Cash Qualification Information Use Case

#### 1.1 Brief Description

This use case will describe how the user and the system interact to input cash qualification information concerning renters and/or additional drivers. It will show the flow of events that occur when information is input and/or selected in this area.

### 2. Flow of Events

#### 2.1 Basic Flow

##### 2.1.1 Cash Qualification Information Area

The Enter Cash Qualification Information Use Case begins when the system displays the area for entry and selection of information about the person being cash qualified and the rental. The fields in this area are:

- How Long at the current address:
  - Years
  - Months
- Ownership:
  - (Blank)
  - Own
  - Rent
- Current Employer
- Position
- Supervisor's Name
- Spoke to Whom
- How Long at Current Job:
  - Years
  - Months
- Reason for Renting
  - Car In Shop
  - Weekend
  - Vacation
  - Other
  - Other Reason Field
- Previously Rented:
  - (Blank)
  - Yes
  - No
  - If So, When?

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- Do You Own a Car?:
  - (Blank)
  - Yes
  - No
- Reference #1
  - First Name
  - Last Name
  - Phone Number
  - Relationship
- Reference #2
  - First Name
  - Last Name
  - Phone Number
  - Relationship
- Reference #3
  - First Name
  - Last Name
  - Phone Number
  - Relationship
- Password
- Employee Number

*There are no default values for any of the above fields.*

#### 2.1.2 Option to Cancel

The system displays the option for the user to cancel/exit . At any point during the entry of cash qualification information the user could decide to cancel out of the entry process at which time the use case would continue at alternate flow Cancel/ Exit.

#### 2.1.3 Option to Save

The system displays the option to Save. At any point during the entry of cash qualification information the user could decide to Save, at which time the use case would continue at basic flow Save.

#### 2.1.4 Address and Ownership Information Selection

The user can select how long the person being cash qualified has lived at the current address. The user can also select whether the person being cash qualified owns or rents.

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#### 2.1.5 *Employment Information Entry and Selection*

- The user can enter the employment information about the person being cash qualified. They can enter the employer, the supervisor's name, the person being cash qualified employment position and whom the user spoke to when verifying.
- The user can also select how long the person being cash qualified has been employed at their current job.

#### 2.1.6 *Rental Information Entry/Selection*

- The user can select one or more reason(s) for renting. If the user selects the "other" option, the field for entry of information becomes available for entry. The user then enters the reason.
- The user can select whether the person being cash qualified has rented before. If the user selects "Yes", the field for entry of information about when they last rented becomes available. The user then enters when the last rental was. (See Special Requirements for note.)
- The user can select whether the person being cash qualified owns a car.
- The user can enter the insurance company name, agent's name, agent's phone number and the policy number information about the person being cash qualified.

#### 2.1.7 *References Information Entry*

For all three references listed, the user can enter the First Name, Last Name, Phone Number and Relationship.

#### 2.1.8 *"Approved by:" Employee Number and Password Entry*

The user enters the Employee Number and password that approved the cash qualification.

#### 2.1.9 *Select Save Option*

The user selects the option to Save.

#### 2.1.10 *Validation of Employee Number and Password*

The system validates the Employee Number and password that approved the cash qualification. If the user entered an invalid employee number and password combination the use case continues at alternate flow Invalid Employee Number and Password Combination. If the user entered an employee number and password that does not pass authority check the use case continues at alternate flow Authority Check Failed.

#### 2.1.11 *Save*

The system saves all the information entered or selected in the fields of the Cash Qualification.  
The saved information would include the following:

- How Long at the current address:
  - Years

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- Months
- Ownership:
  - (Blank)
  - Own
  - Rent
- Current Employer
- Position
- Supervisor's Name
- Spoke to Whom
- How Long at Current Job:
  - Years
  - Months
- Reason for Renting
  - Car In Shop
  - Weekend
  - Vacation
  - Other
  - Other Reason Field
- Previously Rented:
  - (Blank)
  - Yes
  - No
  - If So, When?
- Do You Own a Car?:
  - (Blank)
  - Yes
  - No
- Reference #1
  - First Name
  - Last Name
  - Phone Number
  - Relationship
- Reference #2
  - First Name
  - Last Name
  - Phone Number
  - Relationship
- Reference #3
  - First Name
  - Last Name
  - Phone Number
  - Relationship



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- The employee who selected to save the cash qualification information.

#### 2.1.12 End

The Use Case ends.

### 2.2 Alternative Flows

#### 2.2.1 Cancel/ Exit

2.2.1.1 The user selects the option to cancel/exit.

2.2.1.2 The system displays a feedback message warning that the cash qualification data will be lost if the user selects to cancel/exit.

2.2.1.3 The system displays the following options:

- Yes: to exit and lose data.
- No: return to the cash qualification use case.  
(The default option will be No: return to cash qualification.)

2.2.1.4 The user selects Yes the use case ends. If the user selects No then continue in basic flow at the point where the user selected to cancel/exit.

#### 2.2.2 Invalid Employee Number and Password Combination

2.2.2.1 The system displays a feedback message that the entered Employee Number and password is invalid.

2.2.2.2 The system prompts the user to enter a valid Employee Number/password.

2.2.2.3 The user selects to enter a valid Employee Number/password and returns to "Approved by" Employee Number and Password Entry.

#### 2.2.3 Authority Check Failed

2.2.3.1 The system displays a feedback message that the employee is not allowed to authorize cash qualification.

2.2.3.2 The system prompts the user to enter a valid Employee Number/password.

2.2.3.3 The user selects to enter a valid Employee Number/password and returns to "Approved by" Employee Number and Password Entry.

### 3. Special Requirements for Enter Cash Qualification Information

#### "Do You Own a Car" Text Fields

These fields could be left blank; there is no validation to make sure information was entered.

#### Previously Rented Text Field

The user can enter whatever they want to. They could enter things like "Last summer". "A few months ago". They could also enter date information like "April 2000" or a more formal date like

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"04/24/2001". The field could also be left blank; there is no validation to make sure information was entered.

#### Password and Employee Number

The system requires password and employee number verification when cash qualification information is entered during the open ticket process. The system will not require password and employee number verification during the reservation process.

#### 4. Pre-Conditions

A user is already authorized through a login process to access the panel that is necessary to:

- Create or edit a reservation.
- Open, edit or close a rental ticket.

#### 5. Post-Conditions

#### 6. Extension Points

#### 7. Questions

**Question:** How should the Employee Number Approval field work? Should this field be:

1. Automatically populated (and display only) based upon the user that is currently logged on and opening the ticket? (This assumes person opening ticket is also doing the cash qualification.)
2. Automatically populated based upon the user that is currently logged on and opening the ticket but able to be changed? (This assumes person opening ticket is also doing the cash qualification but also allow changes.)
3. Blank upon initial entry and allow entry of any employee (valid) number? (No assumptions about who is doing the cash qualification.)
4. Blank upon initial entry and have security to authorize employee number? (This way a manager could "authorize" a cash qualification with security.)

**Answer:** Since Cash Qualification information is a serious matter, the input from Jon and Mary is that the last choice is what they wanted. The user will need to enter a valid employee number and update code combination. However this will only be required for an open ticket.

**Question:** What European requirements are there?

**Answer:** Jon Jouris has indicated there could be translations for the U.K., Germany etc. Fields could be eliminated or labels could be changed.

As of 06/01/2001: once the feedback from the review has been integrated, an electronic copy of this document will be forwarded to the proper parties for European requirements and translations.

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## Rental Redesign/ECARS 2.0 Use Case Specification: Notes

**Version 1.8**

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## Revision History

Date	Version	Description	Author
6/14/01	1.0	Initial Draft	M. Pallia
6/25/01	1.1	First Draft	D. Beebe
6/27/01	1.2	<p>Revisions after meeting and getting feedback from Maribeth, Mike P. and Jackie L.</p> <p>Changes are:</p> <ul style="list-style-type: none"> <li>• Rewriting for clarification.</li> <li>• Restated Brief Description.</li> <li>• Explained that Notes is accessed via a reservation or ticket.</li> <li>• Added detail to "Notes Summary"</li> <li>• Pulled sort orders and defaults from Special Requirements and back into document.</li> <li>• Added Questions to be asked of the business.</li> </ul>	D. Beebe
06/28/01	1.3	<p>Revisions after feedback in meeting with Marty Tichy.</p> <p>Changes are:</p> <ul style="list-style-type: none"> <li>• Date and Time combined since they are saved in the Notes database as one field.</li> <li>• Multiple users should be able to view the same note or notes. However only one at a time can edit. (This is application wide standard and does not belong in use case.)</li> </ul> <p>This is the version sent to Mary and Jon for the User Review on 7/2</p>	David Beebe

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7/5/01	1.4	<p>Revisions based upon feedback from Mary and Jon. Changes are:</p> <ul style="list-style-type: none"> <li>• Add Status (Reservation, Open and Close) to Summary</li> <li>• Change available Note Types to System, Callback and Internet Shop. Shop, Bill-To and Renter will be available in a later enhancement.</li> <li>• Removed from Add Note Sub Flow the ability for the user to select the Note Type. All Notes currently added will be "Callback" type.</li> <li>• Added the ability to Print a particular note or the entire summary list.</li> </ul>	David Beebe
8/6/01	1.5	Assigned requirements to Iteration and approved for testing.	Jackie Lambert
8/6/01	1.6	Updated Notes Types	David Beebe
09/04/01	1.7	Added information to supplemental requirements indicates what date and time the system displays when viewing saved note(s).	Dave Beebe
11/09/01	1.8	Removed requirements to Print Current Page.	Dave Beebe

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## Use Case Specification: Notes

### 1. Notes Use Case

#### 1.1 Brief Description

This use case describes how the user interacts with the system to view all notes associated to a ticket or reservation, select to view certain types of notes, add a new note or view the full details of a previously entered note.

### 2. Flow of Events

#### 2.1 Basic Flow

##### 2.1.1 Selection to View Notes

The Notes Use Case begins when the user navigates to the Notes area of a reservation or ticket. This could take place at any point in the reservation and ticket process. (Notes can be viewed at any point in the ticket process: when creating a reservation, editing the reservation, opening a ticket using the reservation, editing the open ticket, closing the ticket and after the ticket is closed. Notes will carry forward from a reservation to a ticket when a ticket is opened using the reservation.)

##### 2.1.2 System Searches for Notes

The system searches for and retrieves all notes associated to the reservation or ticket .

##### 2.1.3 System Displays Notes Summary

The system displays the notes to the user in a summary list. On initial entry to the Notes Summary List the system will display all notes, regardless of type, sorted from the newest to the oldest by date and time. The columns displayed to the user are the following:

- Date and Time (when the note was saved)
- Note
- Status
  - Reservation
  - Open
  - Close
- Note Type
  - Reservation
  - Shop
  - Bill-To
  - Renter
  - System
  - Callback

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- Created By
- ARMS message status:
  - (Blank)
  - Sent

#### 2.1.4 Option to Add Note, View Note Detail, Print Notes and change displayed Note Types

The system displays the options to select to:

- Add a new note to the reservation or ticket.
- View a single note that had been previously entered.
- Print (either the Current Page or All Notes)
- View notes of a particular Type and/or Status

#### 2.1.5 Add Note, View Note Detail and View Summary Based Upon Note Type Subflows

Depending on user preference, he or she will use one of the following three sub-flows: Add Note, View Note Detail and View Summary Based Upon Note Type . More commonly, the Add Note Sub-flow is used. If the user selects to print all Notes (regardless of Note Type and Status) the use case continues at alternate flow Print All Records.

### 2.2 Add Note Subflow

#### 2.2.1 Select to Add Note

The user selects to add a Note to the reservation or ticket .

- (A Note can be added at any point in the ticket process: when creating a reservation, editing the reservation, opening a ticket using the reservation, editing the open ticket, closing the ticket and after the ticket is closed.)
- System generated notes are defined in individual use cases. However they will use the same write process as manual Notes .

#### 2.2.2 Add Note Information Area

The system displays the area for the user to enter the Note. (Enhancement proposed for the future: System also displays the area for the user to select the Note Type. The possible Note Types are: Callback, Shop Bill-To and Renter.)

#### 2.2.3 Option to Save and Option to Cancel

The system displays the option to:

- Save
- Cancel

At any point during the Add Note process the user could decide to exit at which time the use case would continue at alternate flow Cancel. (If the user cancels without making an entry, no feedback message will be displayed.)

#### 2.2.4 User Entry of Note

The user enters the note.



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#### 2.2.5 *User Selects Option to Save*

The user selects to Save.

#### 2.2.6 *Validation Note was entered*

The system validates that a note has been entered. If the system determines a note was not entered, the use case will continue at alternate flow No Note.

#### 2.2.7 *Save Add Note information*

The system saves the note. This system also saves information from the following areas:

- Date and Time
- Note
- Status
- Note Type of "Callback"
- Created By

The user will not be able to select the Note Type, date & time, Status and the "Created By" party. These items are determined and populated by the system. (As stated above, future proposed enhancements will allow the user to select the Note Type.)

#### 2.2.8 *End*

The system closes the Add Note area and the use case ends.

### 2.3 View Note Detail Subflow

#### 2.3.1 *Select to View Note*

The user selects to view the details of a single, previously entered note within the summary list of notes for the selected reservation or ticket.

#### 2.3.2 *View Note Detail Area*

The system displays the Note Detail showing:

- Date and Time
- Note
- Note Type
- Created By
- ARMS message status :

#### 2.3.3 *Option to Close View Note Area*

The system displays the option to close the area that displays the details of a particular note. The system also displays the options to print the current Note.

#### 2.3.4 *User Selects Option to Close the Viewed Note*

The user selects to close the View Note Detail area. If the user selects to print the current Note the use case continues at alternate flow Print Note.

#### 2.3.5 *End*

The system closes the View Note Detail area and the use case ends.

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## 2.4 View Summary Based Upon Note Type Subflow

### 2.4.1 *Select to View Summary Based Upon Note Type*

The user selects to the view notes summary of a certain note type.

### 2.4.2 *Display Possible Note Types and Ticket Status to sort from*

The system displays the list of possible Note Types to select to sort from:

- All
- System
- Internet Shop

(Future Proposed Enhancements will allow the user to select to also sort from Shop, Bill-To and Renter.)

The system displays the list of possible Ticket Status to Sort From

- All
- Reservation
- Open
- Close

### 2.4.3 *Options to Print*

The system displays the option to:

- Print All Notes

### 2.4.4 *User Selects Note Type*

The user selects a Note Type they want to view.

### 2.4.5 *System Searches for Notes*

The system searches for and retrieves notes associated to the ticket or reservation .

### 2.4.6 *System Displays Notes Summary*

The system displays the notes to the user in a summary list. The columns displayed to the user are the following:

- Date and Time
- Note
- Note Type: based upon the type the user selected
- Created By
- ARMS message status

### 2.4.7 *Print*

If the user selects to print all Notes (regardless of the currently displayed Note Type) the use case continues at alternate flow Print All Notes.

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#### 2.4.8 End

The use case ends.

### 2.5 Alternative Flows

#### 2.5.1 No Note

2.5.1.1 The system displays a feedback message: "Please enter a Note if selecting to Save."

2.5.1.2 The user has the option to:

- Enter the note
- Exit the Add Note process

2.5.1.3 If the user selects to enter the note, use case proceeds to User Entry of Note in the Sub Flow "Add Note". If the user selects to exit the Add Note process the use case ends.

#### 2.5.2 Cancel

2.5.2.1 The system displays a feedback message: "Are you sure you want to exit and lose the entered information?"

2.5.2.2 The user has the options:

- Yes (exit and lose the information)
  - No (return to the use case at the point where the user selected to exit from.)
- The default option will be "No".

2.5.2.3 If the user selects to exit the Add Note process, the use case proceeds to System Displays Notes Summary in the Basic Flow . If the user selects No, the use case proceeds to User Entry of Note in the Add Note Subflow.

#### 2.5.3 Print All Notes

2.5.3.1 The system initiates the Print Use Case.

2.5.3.2 The use case returns to the point where the user initiated the print function.

#### 2.5.4 Print Note

2.5.4.1 The system initiates the Print Use Case .

2.5.4.2 The use case returns to the point where the user initiated the print function.

### 3. Special Requirements for Notes

- Previously entered notes may not be edited or deleted by the user.
- ystem generated and manually entered) will be displayed based upon the date and time of the physical terminal location of the user viewing the notes.

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#### 4. Pre-Conditions

- A user is authorized through a login process to create or edit a reservation or ticket.
- The user has accessed a reservation or ticket, either in the process of editing or creating.

#### 5. Post-Conditions

#### 6. Questions

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## Enterprise Rent-A-Car

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# Rental Redesign/ECARS 2.0 Business Use-Case Specification: Open Retail Rental Ticket without Payment

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## Revision History

Date	Version	Description	Author
03/16/2001	1.0	Initial Draft (Initial creation of Use Case)	David Beebe
04/05/2001	1.1	Updating to make look and language like other Use Cases	David Beebe
05/10/2001	1.2	Version after reviews by System Analysts.	David Beebe
05/15/2001	1.3	Revision after feedback from Jeff, Todd and Systems Analysts	David Beebe
05/24/2001	1.4	Revision after reviews by Mary Schmitz and Jon Jouris	David Beebe
05/21/2001	1.5	Version as placed into Req. Pro	David Beebe
06/07/2001	1.6	<p>Revision made to match "Basic Reservation" Use Case.</p> <ol style="list-style-type: none"> <li>Split alternate flow "Under Age Soft Edit Restriction" into two alternate flows: <u>Under Age (18-20) Soft Edit Restriction</u> and <u>Under Age (21-24) Soft Edit Restriction</u>.</li> </ol> <p>Revision made to explain that matching Nat Res Reservation will be handled in a later iteration.</p> <ol style="list-style-type: none"> <li>Split alternate flow "Matching Reservations" into two alternate flows: <u>Matching Branch Reservation(s)</u> and <u>Matching Nat Res Reservation(s)</u></li> </ol>	David Beebe
06/19/2001	1.7	<p>Revisions made to "<u>Selection from Units Not Rented List</u>" alternate flow.</p> <ol style="list-style-type: none"> <li>Added Buy Back Indicator to the list of information that should be returned.</li> <li>Added statement that the default sort order for the list will be alphanumerically by the Unit Number.</li> </ol>	David Beebe
06/26/2001	1.8	<p>Revision made to match "Basic Reservation" Use Case.</p> <ol style="list-style-type: none"> <li>Split alternate flow "Expired Driver's License" into two alternate flows: <u>Expired Driver's License</u> and</li> </ol>	David Beebe

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		<u>Driver's License Expires Today.</u>	
12/07/2001	2.0	Rewrote document.	Dave Beebe

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## Business Use Case Specification: Open Retail Rental Ticket without Payment

### 1. Open Retail Rental Ticket without Payment Use Case

#### 1.1 Brief Description

This use case will describe how the user and system interact to create a retail rental ticket. It will show the flow of events that occur when information is entered into a new retail type rental ticket so that it is completed.

### 2. **Flow of Events**

#### 1.1 Basic Flow

##### 1.1.1 Search Criteria

The Open New Retail Rental Ticket Use Case begins when the system displays the area for entry of search criteria for repeat renter information. The system displays all search criteria fields blanked out, allowing the user to enter any combination of the following information:

- Phone Number
- Last Name
- First Name
- Driver's License Number

##### 1.1.2 Options to Search, Clear/Reset and to select to Enter New Driver

The system displays the option to select to perform the search from information entered in the above fields. The system also displays:

- the option for the user to reset the entered information.
- to enter New Driver information

##### 1.1.3 User Entry of Name and Phone Number

The user enters the renter's first and last name and telephone number. (Last name could either be just the first couple letters or the complete last name) If the user selects to enter New Driver information the use case will continue at System Performs Reservation Search in the basic flow.

##### 1.1.4 User Selects Search Option

The user selects the option to perform the search. If the user only enters only the last name and selects to search, the use case will continue at Need More Search Criteria alternate flow.

##### 1.1.5 System Performs Repeat Renter Search

The system performs the search for matching repeat renter information if a renter's telephone number was entered in the initial search criteria area. If information was not entered in the renter's telephone number area, the use case will continue at Renter Personal Information Area in one of the subflows.

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#### 1.1.6 System Performs Reservation Search

The system searches for all the reservations that match the information entered. The search for the name will be a wildcard search.

#### 1.1.7 Reservation Search Results

The system finds no matching reservations and the use case continues at the next step in the basic flow. If the search produces one or more matching branch reservation then continue at alternate flow Matching Branch Reservation(s). If the search produces one or more matching Nat Res reservation, then continue at alternate flow Matching Nat Res Reservation.

#### 1.1.8 Repeat Renter Search Results

The system produces no matching repeat renter records and the use case continues at the next step in the basic flow. If the search produces one or more matching repeat renter match, then continue at alternate flow Matching Repeat Renter Record(s).

#### 1.1.9 Renter Personal Information Area

The system displays the area for entry and selection of information about the renter. The fields in this area are:

##### Name:

- Last Name
- First Name

##### Phone Number

- Home Phone Number
- Work Phone Number (and extension)
- Employer
- Other Phone Number (and phone type)

##### Home Address

- Address
- Zip/Postal Code
- Country
- City
- State/Province

##### Driver's License

- License Number
- Expiration Date
- Issuing Country
- State Issued
- SSN (Social Security Number)
- Date of Birth
- Eye Color
- Height
- Hair Color

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Weigh tThe system also displays the option for the user to enter the work address. If the user selects the option, the use case continues at alternate flow Work Address Information Entry.

#### 1.1.10 Option to Complete

The system displays the option for the user to complete the ticket. At any point the user could select this option.

#### 1.1.11 Personal Information Area Field Population

Unless a reservation or repeat renter information has been applied to the ticket the system populates the matching fields with any information previously entered in the basic flow step User Entry of Name and Phone Number. (See Special Requirements for table showing how information from the Initial Search Criteria Area fields is populated in the matching Renter Personal Information Area fields.)

The system also makes the information in the Information Area fields available for edit. The country, based upon the profile of the renting branch location, will be defaulted into the Country field.

#### 1.1.12 Address and Zip/Postal Code Information Entry

The user enters the Address and Zip/Postal Code.

#### 1.1.13 Zip/Postal Code Search Option

The system displays the option to search for the City and State/Province based upon the Zip/Postal code and Country.

#### 1.1.14 Zip/Postal Code Search Selection

The user selects the option and the system performs the search for the City and State/Province that match the Zip/Postal Code and Country.

#### 1.1.15 Zip/Postal Code Search Results

The system searches for and produces a single City and State/Province result and continues at the next step in the basic flow. If the search produces no matching city and State/Province information, the use case continues at alternate flow No Match to Zip/Postal Code. If the search produces multiple cities, the use case continues at alternate flow Multiple City Results.

#### 1.1.16 City and State/Province Field Population

The system populates the City and State/Province fields. The system also makes the information in these fields available for edit.

#### 1.1.17 Phone and Driver's License Information Entry

The user enters the home phone number, work phone number, other phone number and selects the other phone number type. (See Special Requirements for list of "Other" Phone Number Types.) The user also enters the License Number, License Expiration Date, State Issued, Date of Birth, Social Security Number, Height, Weight, Hair Color, Eye Color and

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selects the Work Address Option. The use case continues at alternate flow Other Address Information Entry.

#### 1.1.18 *Cash Qualification, Renter's Insurance and Additional Driver*

If cash qualification information needs to be gathered about the renter, the use case continues at alternate flow Cash Qualification Information. If insurance detail information needs to be gathered about the renter, the use case continues at alternate flow Insurance Information. If there are additional driver(s) and information needs to be gathered, continue at alternate flow Additional Driver.

#### 1.1.19 *Referral Information*

This use case extends to the Referral use case for entry, validation and saving of all information concerning the Referral source.

#### 1.1.20 *Dates and Rates*

This use case extends to the Dates/Rates use case for entry, validation and saving of all information concerning dates, rates, taxes and surcharges. While in the Dates/Rates area the user selects a rental vehicle to be applied to the ticket.

#### 1.1.21 *User Selects Option to Complete*

The user selects the option to complete the ticket.

#### 1.1.22 *System Displays Complete Options*

The system displays the option for the user to select the following type of complete tickets

- "Complete" If the user selects "Complete", the use case continues at subflow Complete Ticket.
- "Complete - Unit Pend" If the user selects "Complete - Unit Pend", the use case continues at subflow Complete - Unit Pend Ticket.
- "Complete - Prewrite" If the user selects "Complete - Prewrite", the use case continues at subflow Complete - Prewrite Ticket.

### 1.2 Complete Ticket Sub-Flow

#### 1.2.1 *User Selects Complete Option*

The user selects the "Complete" option.

#### 1.2.2 *Validation of complete Renter Information*

The system validates that information concerning the renter exists in all of the following areas:

Name:

- First Name
- Last Name

Address:

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- Address
- Zip/Postal Code
- Country
- City
- State/Province

Driver's License:

- License Number
- License Expiration Date
- State Issued
- Date of Birth
- Social Security Number
- Height
- Weight
- Hair Color
- Eye Color

### 1.2.3 Validation of Driver's License Expiration Date Information

The system validates that the information entered in driver's license expiration date field for the renter and additional drivers is greater than the current date. If user enters a driver's license expiration date that is less than the current date, the use case continues at alternate flow Expired Driver's License. If the user enters a driver's license expiration date that is the same as the current date, the use case continues at alternate flow Driver's License Expires Today.

### 1.2.4 Validation Of Date of Birth Information

The system validates that the Date of Birth for the renter and additional drivers is not greater or less than the restrictions for rental. If the user enters a Date of Birth that results in the renter's age being greater than the restrictions the use case continues at alternate flow Over Soft Edit Age Restriction. If the user enters a Date of Birth that results in the renter's age being 18-20, the use case continues at alternate flow Under Age (18-20) Soft Edit Restriction. If the user enters a Date of Birth that results in the renter's age being 21-24, the use case continues at Under Age (21-24) Soft Edit Restriction. If the user enter a Date of Birth that results in the renter's age being less than the hard edit age restriction the use case continues at alternate flow Under Hard Edit Age Restriction.

### 1.2.5 Validation Of Rate Information

The system validates the necessary rate information is complete.

- If there is a rate in the daily field there must be a rate in the hourly field.
- If there is a rate in the weekly field there must be a rate in the daily field.
- If there is a rate in the monthly field there must be a rate in the weekly field.
- If there is a rate that either the unlimited mileage option is selected or that both the corresponding excess charge and unlimited mileage fields are completed.

If the system determines that these requirements are not met, the use case will continue at alternate flow Incomplete Rate Information.

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#### 1.2.6 Other Validation

The system validates that a:

- unit has been selected (valid unit number and license plate or VIN number).
- Date out and Time Out fields are populated with valid values

#### 1.2.7 Incomplete Ticket Feedback Message

If any of the above areas and fields are missing information the system will present the user with a feedback message as to what required fields are not filled to print a complete ticket. The system will display the option for the user to cancel the print action and return to the open ticket process.

#### 1.2.8 Save Ticket Information

The system saves all the information entered in the fields of the open rental ticket process. This would be information from the following areas:

- Renter Personal Information
- Cash Qualification, Renter's Insurance and Additional Driver Information
- Referral Information
- Rental Information
- Additional Product(s), Taxes and Surcharges

The system saves other information that did not come from other use cases. This information would be:

- Ticket Number
- Employee number of person that opened the ticket
- Group/Branch information
- Information about the terminal the ticket was opened on

Links will take you to the tables/locations in this document that contain the full list of items to be saved.)

#### 1.2.9 Print Ticket

This use case extends to the Print Ticket Use case .

#### 1.2.10 End

The use case ends.

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### 1.3 Complete Unit-Pend Ticket Sub-Flow

#### 1.3.1 *Unit Pend Ticket*

This subflow is the same as the Complete ticket except that while in the Dates/Rates area, the user does not select a rental vehicle to be applied to the ticket.

#### 1.3.2 *User Selects Complete – Unit Pend Option*

The user selects the "Complete – Unit Pend" option.

#### 1.3.3 *Complete Unit-Pend Ticket Validation*

The system performs the same validation as the Complete Ticket subflow except that the system does not validate that a unit has been selected.

#### 1.3.4 *Incomplete Ticket Feedback Message*

If any of the above areas and fields are missing information the system will present the user with a feedback message as to what required fields are not filled to print a complete unit pended ticket. The system will display the option for the user to cancel the print action and return to the open ticket process.

#### 1.3.5 *Save Ticket Information*

The system saves all the information entered in the fields of the open rental ticket process. This would be information from the following areas:

- Renter Personal Information
- Cash Qualification, Renter's Insurance and Additional Driver Information
- Referral Information
- Rental Information
- Additional Product(s), Taxes and Surcharges

The system saves other information that did not come from other use cases. This information would be:

- Ticket Number
- Employee number of person that opened the ticket
- Group/Branch information
- Information about the terminal the ticket was opened on

Links will take you to the tables/locations in this document that contain the full list of items to be saved.)

#### 1.3.6 *Print Ticket*

This use case extends to the Print Ticket Use case.

#### 1.3.7 *End*

This subflow and the use case ends.



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## 1.4 Complete Pre-Write Ticket Sub-Flow

### 1.4.1 *Pre Write Ticket*

This subflow is the same as the Complete ticket except that the user could only enter part of the needed information. While in the Dates/Rates area the user selects a billing cycle and usually selects a rental vehicle to be applied to the ticket.

### 1.4.2 *User Selects Complete Pre-Write Option*

The user selects the "Complete Pre-Write" option.

### 1.4.3 *Validation of entry of Name*

The system validates that a first and last name has been entered for the renter.

### 1.4.4 *Validation of Billing Cycle*

This use case extends to the Dates/Rates Use Case to verify that a Billing Cycle has been selected.

### 1.4.5 *Validation Of Date of Birth Information*

he system validates that it is not greater or less than the restrictions for rental. If the user enters a Date of Birth that results in either the renter's or driver's age being greater than the restrictions the use case continues at alternate flow Over Soft Edit Age Restriction. If the user enters a Date of Birth that results in either the renter's or driver's age being 18-20, the use case continues at alternate flow Under Age (18-20) Soft Edit Restriction. If the user enters a Date of Birth that results in either the renter's or driver's age being 21-24, the use case continues at Under Age (21-24) Soft Edit Restriction. If the user enter a Date of Birth that results in either the renter's or driver's age being less than the hard edit age restriction the use case continues at alternate flow Under Hard Edit Age Restriction. (Date of Birth is not required for a prewrite, however if a date is entered it should be validated.)

### 1.4.6 *Incomplete Ticket Feedback Message*

If any of the above areas and fields are missing information the system will present the user with a feedback message as to what required fields are not filled to print a complete prewrite ticket. The system will display the option for the user to cancel the print action and return to the open ticket process.

### 1.4.7 *Save Ticket Information*

The system saves all the information entered in the fields of the open rental ticket process. This would be information from the following areas:

- Renter Personal Information
- Cash Qualification, Renter's Insurance and Additional Driver Information
- Referral Information
- Rental Information

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- **Additional Product(s), Taxes and Surcharges**

The system saves other information that did not come from other use cases. This information would be:

- Ticket Number
- Employee number of person that opened the ticket
- Group/Branch information
- Information about the terminal the ticket was opened on

#### 1.4.8 *Print Ticket*

This use case extends to the Print Ticket Use case.

#### 1.4.9 *End*

This subflow and use case ends.

### 1.5 **Alternative Flows**

#### 1.5.1 Need More Search Criteria

1.5.1.1 The system displays a feedback error message that the last name cannot be the only search criteria and to enter at least one more criteria.

1.5.1.2 The user selects to enter another piece of search criteria information and the use case proceeds back to User Selects Search Option in the basic flow.

#### 1.5.2 Matching Branch Reservation(s)

1.5.2.1 If the system finds that there is one or more current reservations based upon either the renter first and last name, telephone number, date of birth and driver's license number and State/Province, the system should display all the reservations that match the information that was input. The returned matched information list should include the following:

- Reservation Number
- Renter First Name
- Renter Last Name
- Pickup Date
- Pickup Time
- Car Class
- Pickup Branch Location
- Date Reservation Created
- Date Reservation Last Modified

1.5.2.2 The system will present a list for the user to select one of the displayed/summarized reservations. (See Special Requirements link for what reservations will not be displayed.)

1.5.2.3 The user selects a reservation from the list and continues at Renter Personal Information Area in the basic flow. The user can also select at any time to cancel out of the displayed list of

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reservations. If a phone number was entered in the initial search criteria area the use case will continue at Repeat Renter Search in the basic flow. If a phone number was not entered in the initial search criteria area the use case will continue at Renter Personal Information Area in the basic flow.

### 1.5.3 Matching Nat Res Reservation(s)

- 1.5.3.1 In a later elaboration, the matching of a Nat Res Reservation to an open ticket will be taken care of.

### 1.5.4 Matching Repeat Renter Record(s)

- 1.5.4.1 If the system finds that there one or more repeat renter records that match based upon the telephone number, the system should display all the repeat renter records that match the information that was input. The returned information list should include the following:

- Renter First and Last Name
- Street Address, City, State and Postal Code
- Home Phone
- Office Phone (and extension)
- Driver License Number
- Driver License State
- Date Of Birth
- Date Last Rented

- 1.5.4.2 The system should also indicate if any of the repeat renter records on the above summary are on the Renter Warning/Do Not Rent List.

- 1.5.4.3 The system will present the option for the user to select the repeat renter record to apply to the open ticket.

- 1.5.4.4 The user selects a repeat renter record from the list. If the user selects a repeat renter record that is on the Renter Warning/Do Not Rent List, the use case will continue at alternate flow Renter Warning/Do Not Rent. The user can also select at any time to cancel out of the displayed list of repeat renter records and continue at Renter Personal Information Area in the basic flow.

- 1.5.4.5 The system displays the Renter Personal Information Area with the information from the selected repeat renter record populated in the correct fields. The fields in this area and the information that could come from the repeat renter record are:

#### Name:

- Last Name
- First Name

#### Phone Number

- Home Phone Number
- Work Phone Number (and extension)
- Employer
- Other Phone Number (and phone type)

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#### Home Address

- Address
- Zip/Postal Code
- Country
- City
- State/Province

#### Driver's License

- License Number
- License Expiration Date
- Issuing Country
- State Issued
- Date of Birth
- Social Security Number
- Height
- Weight
- Hair Color
- Eye Color

The system also displays the option to change the presented Repeat Renter Personal Information.

- 1.5.4.6 If the user selects the option to change the presented Renter Personal Information, the use case continues at Address and Zip/Postal Code Information Entry in the basic flow . If the user does not select the option to change the presented Renter Personal Information, the use case continues at Cash Qualification, Renter's Insurance and Additional Driver in the basic flow.

#### 1.5.5 Renter Warning/Do Not Rent

- 1.5.5.1 If the selected repeat renter record is on the renter warning/do not rent list the system displays a feedback message that the renter is on the Renter Warning List.

- 1.5.5.2 The system displays the option for the user to:

- Exit the open ticket process.
- View the detailed Renter Warning information.

- 1.5.5.3 The user selects to view the detailed Renter Warning Information. If the user selects the exit the open ticket process option the use case continues at alternate flow Cancel/Exit.

- 1.5.5.4 The system will display the more detailed information about the person along with messages about the warning. The warning must include the following:

- Repeat Renter First and Last Name
- Street Address
- City
- State
- Postal Code
- Home Phone
- Office Phone (and extension)
- Driver License Number

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- Driver License State
- Date Of Birth
- Height
- Weight
- Social Security Number
- Employer
- The ticket number and group/branch that the warning report was referenced to.
- The text information from the report detailing why the renter was placed on the warning/do not rent list.
- Reported by employee name
- Reported by employee number
- Reported by employee title
- Reported by employee phone number (and extension)
- Reported by employee group/branch location
- Date reported

1.5.5.5 The system displays the option to either rent or do not rent.

1.5.5.6 The user selects to rent and the use case continues at Renter Personal Information Area in the basic flow. If the user selects "Do Not Rent", the use case continues at alternate flow Cancel/Exit. In both cases the appropriate renter warning administrative programs will be notified.

#### 1.5.6 No Match to Zip/Postal Code

1.5.6.1 The system displays a feedback message that the zip/postal code and country combination does not produce matching city and state/province information.

1.5.6.2 The system prompts the user to manually enter city and state/province information.

1.5.6.3 The user selects to manually enter city and state/province information and the use case proceeds back to Phone and Driver's License Information Entry in the basic flow.

#### 1.5.7 Multiple City Results

1.5.7.1 The system displays a feedback message that the Zip/Postal Code and Country combination produces more than one matching city.

1.5.7.2 The system displays the list of cities and prompts the user to select a City.

1.5.7.3 The user selects a City from the list the use case proceeds back to City and State/Province Field Population in the basic flow.

#### 1.5.8 Other Address Information Entry

1.5.8.1 The system displays the area for entry and selection of other address information about the renter. The fields in this area are:

- Address Type
- Address
- Zip/postal Code

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- Country
- City
- State/Province

- 1.5.8.2 The country, based upon the profile of the renting branch location, will be defaulted into the Country field.
- 1.5.8.3 The user enters the Address and Zip/Postal Code.
- 1.5.8.4 The system displays the option to search for the city and State/Province based upon the Zip/Postal Code and Country
- 1.5.8.5 The user selects the option to perform the search for the City and State/Province that match the Zip/Postal Code and Country.
- 1.5.8.6 The system searches for the City and State/Province that match the Zip/Postal Code and Country.
- 1.5.8.7 The system produces a single City and State/Province result and continues at the next step in the basic flow. If the search produces no matching city and State/Province information, the use case continues at alternate flow No Match to Zip/Postal Code. If the search produces multiple cities, the use case continues at alternate flow Multiple City Results.
- 1.5.8.8 The system populates the City and State/Province fields. The system also makes the information in these fields available for edit.
- 1.5.8.9 The system displays the option for the user to exit and return to the basic flow.
- 1.5.8.10 The user selects this option and the use case proceeds back to Renter Personal Information Area in the basic flow.
- 1.5.9 Expired Driver's License
- 1.5.9.1 The system displays a feedback message that the entered driver's license expiration date is invalid because it is less than the current date.
- 1.5.9.2 The system prompts the user to:
- Change/enter valid expiration date.
  - Exit the open ticket process.
- 1.5.9.3 If the user selects to change the expiration date, the use case proceeds back to Phone and Driver's License Information Entry in the basic flow. If the user selects to exit the open ticket process the use case continues at alternate flow Cancel/Exit.
- 1.5.10 Driver's License Expires Today
- 1.5.10.1 The system displays a feedback message that the entered driver's license expiration date is the same as the current date.
- 1.5.10.2 The system prompts the user to:
- Continue with the open ticket process
  - Change/enter different expiration date
  - Exit the open ticket process
- 1.5.10.3 If the user selects to continue with the open ticket process, the use case continues at Cash

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Qualification, Renter's Insurance and Additional Driver in the basic flow . If the user selects to change the expiration date, the use case proceeds back to Phone and Driver's License Information Entry in the basic flow . If the user selects to exit the open ticket process the use case continues at alternate flow Cancel/Exit.

#### 1.5.11 Over Age Soft Edit Restriction

1.5.11.1 The system determines that the age of the renter is equal to or greater than 70 years old.

1.5.11.2 The system displays a feedback message that the entered date of birth results in the age of the renter being over the age restriction. The system also displays the entered date of birth and the renter's age.

1.5.11.3 The system prompts the user to:

- Continue with open ticket process.
- Enter correct date of birth.
- Exit the open ticket process.

1.5.11.4 If the user selects to continue with the open ticket process, the use case continues at Cash Qualification, Renter's Insurance and Additional Driver in the basic flow. If the user selects to change the date of birth, the use case proceeds back to Phone and Driver's License Information Entry in the basic flow. If the user selects to exit the open ticket process, the use case continues at alternate flow Cancel/Exit.

#### 1.5.12 Under Age (18-20) Soft Edit Restriction

1.5.12.1 The system determines that the age of the renter is 18 to 20 years old.

1.5.12.2 The system displays a feedback message that the entered date of birth results in the age of the renter being under the age restriction. The system also displays the entered date of birth and the renter's age.

1.5.12.3 The system prompts the user to:

- Continue with open ticket process.
- Enter correct date of birth.
- Exit the open ticket process.

1.5.12.4 If the user selects to continue with the open ticket process, the use case continues at Cash Qualification and Renter's Insurance in the basic flow. If the user selects to change the date of birth, the use case proceeds back to Phone and Driver's License Information Entry in the basic flow. If the user selects to exit the open ticket process, the use case continues at alternate flow Cancel/Exit.

#### 1.5.13 Under Age (21-24) Soft Edit Restriction

1.5.13.1 The system determines that the age of the renter is 21 to 24 years old.

1.5.13.2 The system displays a feedback message that the entered date of birth results in the age of the renter being under the age restriction. The system also displays the entered date of birth and the renter's age.

1.5.13.3 The system prompts the user to:

- Continue with open ticket process.

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- Enter correct date of birth.
- Exit the open ticket process.

1.5.13.4 If the user selects to continue with the open ticket process, the use case continues at Cash Qualification and Renter's Insurance in the basic flow. If the user selects to change the date of birth, the use case proceeds back to Phone and Driver's License Information Entry in the basic flow. If the user selects to exit the open ticket process, the use case continues at alternate flow Cancel/Exit.

#### 1.5.14 Under Age Hard Edit Restriction

1.5.14.1 The system determines that the age of the renter is equal to or under the age of 17 years old.

1.5.14.2 The system displays a feedback message that the entered date of birth results in the age of the renter being under the age restriction. The system also displays the entered date of birth and the renter's age.

1.5.14.3 The system prompts the user to:

- Correct the date of birth.
- Exit the open ticket process.

1.5.14.4 If the user selects to change the date of birth, the use case proceeds back to Phone and Driver's License Information Entry in the basic flow. If the user selects to exit the open ticket process, the use case continues at alternate flow Cancel/Exit.

#### 1.5.15 Additional Driver

1.5.15.1 The system displays the area for entry and selection of information about the additional driver. The fields in this area are:

##### Name:

- Last Name
- First Name

##### Phone Number

- Home Phone Number
- Work Phone Number (and extension)
- Employer
- Other Phone Number (and phone type)

##### Home Address

- Address
- Zip/Postal Code
- Country
- City
- State/Province

##### Driver's License

- License Number



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- Expiration Date
- Issuing Country
- State Issued
- Date of Birth
- Social Security Number
- Height
- Weight
- Hair Color
- Eye Color

- 1.5.15.2 The system displays the option to search for the Repeat Renter Information for the additional driver based upon the home phone number.
- 1.5.15.3 The user enters home phone number of the additional driver.
- 1.5.15.4 The user selects the option and the system performs the search for matching repeat renter information.
- 1.5.15.5 The system produces no matching repeat renter records and the use case continues at the next step in this alternate flow. If the system produces one or more matching repeat renter records, the continue at alternate flow Matching Repeat Renter Record(s).
- 1.5.15.6 The user enters the first and last name of the additional driver.
- 1.5.15.7 The system displays the option for the user to select that the additional driver has the same address information as the renter. If the user selects this option, continue at 1.5.15.14. in this (alternate) flow.
- 1.5.15.8 The user enters the street address and zip/postal code.
- 1.5.15.9 The system displays the option to search for the City and State/Province based upon the Zip/Postal Code and Country.
- 1.5.15.10 The user selects the option and the system performs the search for the City and State/Province that match the Zip/Postal Code and Country.
- 1.5.15.11 The system searches for and produces a single City and State/Province result and continues at the next step in this alternate flow. The system also makes the information in these fields available for edit. If the search produces no matching city and State/Province information, the use case continues at alternate flow No Match to Zip/Postal Code. If the search produces multiple cities the use case continues at alternate flow Multiple City Results.
- 1.5.15.12 The system populates the City and State/Province fields. The system also makes the information in these fields available for edit.
- 1.5.15.13 The user enters the home phone number, work phone number, other phone number and selects the other phone number type. The user also enters the Driver's License Number, Driver's License Expiration Date, State Issued, Date of Birth, Social Security Number, Height, Weight, Hair Color and Eye Color. (See Special Requirements for list of "Other" Phone Number Type.) The system also displays the option for the user to select/list the additional driver "with valid license". If the user selects this option, the use case continues at the next step in this alternate flow.

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1.5.15.14 The system displays the area for entry of additional driver's credit card information. The fields in this area include:

- Credit Card Number
- Credit Card Type
- Name that appears on the Credit Card
- Expiration Date

*(There is currently no validation or processing of the entered credit card information.)*

1.5.15.15 If cash qualification information needs to be gathered about the additional driver, the use case continues at alternate flow Cash Qualification Information. If insurance detail information needs to be gathered about the additional driver, the use case continues at alternate flow Insurance Information.

1.5.15.16 The system displays the option for the user to:

- Add more additional drivers.
- Exit and return to the basic flow.

1.5.15.17 If the user selects to add more additional drivers the system adds another blank additional driver area and returns to the first step of this alternate flow. If the user selects to exit the use case returns to the point in the basic flow where the user selected to add the additional driver information.

#### 1.5.16 Cash Qualification Information

1.5.16.1 If the rental requires cash qualification information about the renter or additional driver the use case extends to the Enter Cash Qualification Information Use Case.

#### 1.5.17 Insurance Information

1.5.17.1 If the rental requires insurance information about the renter or additional driver the use case extends to the Enter Renter's/Additional Driver's Insurance Information Use Case.

#### 1.5.18 Cancel/Exit

1.5.18.1 The user selects the option to cancel/exit.

1.5.18.2 The system displays a feedback message warning that the entered data will be lost if they select to cancel/exit.

1.5.18.3 The system displays the following options:

- Yes: to exit and lose data.
- No: return to the use case they just selected to exit from.

(The default option will be No: return to the area where the user selected the Cancel option from.)

1.5.18.4 The user selects Yes the use case ends. If the user selects No then continue in basic flow at the point where the user selected to cancel/exit.

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## 2. Special Requirements for Open Retail Rental Ticket without Payment

3.1 All lists in this document are the order that items should be placed.

3.2 The information entered in the fields of Initial Search Area will populate the fields of the Renter Personal Information the following manner:

### Initial Search Area

Renter's Telephone Number = Home Phone Number

Renter's Last Name = Last Name

Renter's First Name = First Name

Driver's License Number = Driver's License Number

3.3 List of Other Phone Number Types:

- Home
- Work
- Cell/Mobile
- Pager
- Other

3.4 With the last name the system searches in the same group as the renting branch for a match on the text, applying from left to right on the number of characters for records by the entered name. (There is an implied wildcard at the end of the character set entered, but no leading or imbedded wildcards within the character set.)

3.5 Later enhancements to the open ticket process will pre-populate information into the appropriate rate information fields.

3.6 Types of reservations not shown in the list are as follows:

- Voided reservations
- Reservations that are attached to an open ticket.
- Reservations that were attached to a ticket when it was closed.
- Available reservations where the Pick-up date is greater than 5 calendar days ago.

3.7 If a user cancels out of the open ticket process and a reservation had been previously applied, the reservation becomes available again.

## 3. Pre-Conditions

A user is authorized through a login process to access the panel that is necessary to open ticket.

## 4. Post-Conditions

## 5. Extension Points

## 6. Questions



## Open Ticket Use Case: Retrieve Rates

**Version 1.1**[illegible]

	Version: <1.1>
Open Ticket Use Case:	Date: <12/21/01>
<document identifier>	

## Revision History

Date	Version	Description	Author
08/31/2001	1.0	First draft of Get Rates flow using Perot Engine(s)	Johnny S. Johnston
09/13/2001	1.1	Changes from business review	Johnny S. Johnston

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## Business Use-Case: Open Ticket Get Rates using Perot Engine(s)

### 1. Open Ticket Get Rates

#### 1.1 Brief Description

The purpose of this use case is to attempt to describe what information must be fed from the ECARS 2.0 system to the Perot Engine(s) in order to retrieve the appropriate rates for each product for the rental transaction. In this use case the products for which a rate is to be retrieved are the vehicle and all applicable coverages, where offered (CDW, PAI and SLP). The ECARS 2.0 system will provide the Perot system with specific information about the transaction in order to successfully retrieve rates. This use case is specifically addressing a walk in, open ticket, rental transaction.

### 2. Flow of Events

#### 2.1 Basic Flow

##### 2.1.1 Use Case Begins

This use case should be able to be invoked from anywhere in the Open Ticket process and initiate the request for rates, for appropriate products (in this case vehicle and coverages), from the Perot Engine(s) for a specific rental transaction. (Eventually, this use case will evolve into the one, which is used to get rates for all functions, Reservation, Open and Pre-Write)

##### 2.1.2 Information Needed For Rate Retrieval

The ECARS 2.0 system will need to provide specific information from the transaction to the Perot system to retrieve rates. Perot will require specific information before it will be able to search for products and their associated rates. Below is the list of items the Perot system will need to retrieve rates for an open ticket: (Note: Perot has six engines it uses to get rates for various products. The Rate engine for Vehicle, the Charge engine for estimating and allocating charges, the Equipment engine for ancillary items such as child seat and ski rack, the Coverage engine for insurance coverages, the Ancillary engine for add on fees such as youthful driver and additional driver and the General conditions engine for providing messages and standard conditions.)

- The pickup group and branch
- The pickup date
- The pickup time
- The return group and branch
- The return date
- The return time
- The booking channel (reservation origin)
- The rental status (ticket status – reservation, open, closed...)
- The rate source (account number, account name or default type)
- The rental type (insurance, body shop, dealership, etc.)
- The billing cycle

Note: There needs to be some way that the user has the ability specify a start charges date and time that is different than the pick-up date and time.



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Having values for all of the above items will allow the system to retrieve either a single rate plan or display all multiple rate plans to the user, so they can choose which one to use. Once a single rate plan has been selected, entering or selecting the following information will allow the system to show a rate by product.

- The specific unit (vehicle), either a direct entry or selection from a listing of available units.
- The option to display the car classes associated with the rate plan.
- The coverage(s) (as related to car class)

### 2.1.3 Pickup Group and Branch

By the time this use case is invoked, the system should have already defaulted the pickup group and branch to the terminal location group and branch

### 2.1.4 Pickup date and time

If the user has not entered a pickup date and time, then the system will default the date and time to current. The user can then have the ability to change it.

### 2.1.5 Return Group and Branch

The system should default the return group and branch to the same as the pickup group and branch and allow the user to edit or change this.

### 2.1.6 Return Date and Time

The user is required to entered a return date and time.

### 2.1.7 Booking Channel – Reservation Origin

The reservation origin should be able to be distinguished by the system and have the appropriate value assigned by the system.

### 2.1.8 Rental Status

For this use case the status will be "Open". The system should be able to determine the status and assign the appropriate value for all instances of a rental transaction.

### 2.1.9 Rate Source

The user has either selected an account name or account number to locate and assign a rate source, or has selected to use the default rates.

### 2.1.10 Rental Type

The user is required to select a rental type.

### 2.1.11 Billing Cycle

The user is required to select a billing cycle.

With the above information entered into the system, selected by the user, or determined by the system, the Perot engine should be able to return any and all associated rate plans with a particular account.

If there are multiple rate plans (agreements), the system should display this information to the user, and provide a way to select the appropriate one. Use case continues below.

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If there is a single rate plan (agreement), the area is populated with that plan textual description.

#### 2.1.12 Unit (Vehicle) Selection

The system will allow the user to either enter a specific unit number or to have the ability to select one from a list of available units.

#### 2.1.13 Display all Car Classes for Rate Plan option.

The system will have a feature available which will allow the user to display all of the car classes associated with the specific rate plan selected and the corresponding rates for each car class.

Once the user has selected a single car class the system will display the units available for that car class. When the user selects a vehicle (Unit), this use case continues below.

#### 2.1.14 Get Rates

Once a specific unit has been identified or selected by the user, there should be some mechanism to allow the user to specify to the system to get the rates.

#### 2.1.15 System Returns Rates

With all of the previously entered or system derived information, the system determines by the specific unit, the rate and car class and returns the rate for the vehicle and the appropriate rate for all applicable coverages CDW, PAI and SLP.

The rate information is presented to the user by product for daily, weekly, monthly and hourly time periods. If a rate is not available for a time period, the system returns a value of zero.

This information is displayed to the user in a manner that allows editing or changing of the rates. Any changes in the rates will only apply to this specific rental transaction, and will not be reflected back in the rate plan.

If the system cannot find a car class, based on the unit, for that rate plan, the use case continues at Car Class Not Present In Account Rate Plan.

#### 2.1.16 User Accepts Rates Returned.

The system returns the rates for the time periods indicated for the vehicle, selected or indicated, and all available coverages, CDW, PAI and SLP. The user accepts the rate without changes, informs the renter of the rates by product, and saves the transaction.

The user also has an option to have the system to calculate total charges, for the selected products, over the duration of the rental. This will invoke the estimated charges use case.

The use case ends.

#### 2.1.17 Car Class Not Present In Account Rate Plan

If the car class is not present in the account rate plan, the system notifies the user of this and gives the user the option of using default rates, selecting a different car class within the specific rate plan, selecting another rate source or manually entering in the rates for the vehicle and/or coverages.

If another rate source is selected, default or another account, the use case resumes at 2.1.9.

If another car class is selected within the specific rate plan, the use case resumes at 2.1.13.

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If the user manually elects to manually enter the rates, there should be some function to allow this process. The rates will be saved with the rental transaction.

This use case ends.

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### 3. Special Requirements

3.1 If any component of the information needed for rate retrieval is changed which causes a change in the rates for any item, a message is displayed to the user informing them of such.

#### 3.2 GDS Response Time

Our contracts with GDS systems require that a response be returned to a rate request within seven seconds.

### 4. Pre-Conditions

#### 4.1 User must be logged on

- The user is logged into ECARS 2.0 2.0 application and ECARS 2.0 has validated the user has privileges to perform rate verification.
- The user has access to the local machine.
- The user has access to the network.

### 5. Post-Conditions

5.1 < Post-condition One >

### 6. Extension Points

6.1 <Name of Extension Point>

7. Questions – all answered in initial business review.

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# Enterprise Rent-a-Car

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## Rental Redesign/ECARS 2.0 Business Use-Case Specification: Open Ticket Search

Version 1.7

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## Revision History

Date	Version	Description	Author
03/06/01	1.0	Initial Draft	Allison Bruhn
03/08/01	1.1	1 <sup>st</sup> Revision	Allison Bruhn
03/09/01	1.2	2 <sup>nd</sup> Revision	Allison Bruhn
03/12/01	1.3	3 <sup>rd</sup> Revision	Allison Bruhn
03/14/01	1.4	4 <sup>th</sup> Revision-( <i>integrating comments from meeting with Jeff Roderick, Todd Shylanski, Mark Hansard, Martin Tichy, and Tim Erickson-Ciber</i> )	Allison Bruhn
3/16/01	1.5	5 <sup>th</sup> Revision- ( <i>integrating comments from meeting with Jeff Roderick, Jon Jouris, Mary Schmitz,, and Tim Erickson-Ciber</i> )	David Beebe
3/21/01	1.6	6 <sup>th</sup> Revision- ( <i>integrating comments from meeting with Todd Shylanski, Mark Hansard, Martin Tichy, and Tim Erickson-Ciber</i> )	David Beebe
4/18/01	1.7	Revision to update following items: <ul style="list-style-type: none"> <li>• Changing "customer" to account".</li> <li>• Combining the account number and name searches.</li> </ul>	

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# Business Use-Case Specification: Open Ticket Search

## 1. Open Ticket Search

### 1.1 Brief Description

This use case will describe how a user interacts with a system to search for and locate an open ticket. It will show the flow of events that occur when a search is conducted to locate an open ticket. The system will search for and locate an open ticket (or more than one open ticket) based on the search criteria entered by a user.

## 2. Flow of Events

### 2.1 Basic Workflow

- 2.1.1 The use case begins when the user chooses to search for an open ticket.
- 2.1.2 UC1.1.1 The system displays all search criteria fields emptied out, allowing the user to enter specific search criteria (as can be seen in Tables A and B). UC1.1.2 This use case will default the group/branch location to the machine's physical location. The user may choose to search by one, two or three (three being the maximum) of these search criteria. The criteria does not include the group/branch. If a ticket number is entered as well as other criteria, the system will only search for the ticket number and disregard any other search criteria.
- 2.1.3 TABLE A The user will most commonly enter the following information: Renter last name Renter phone number(s) Ticket Number Note: The current group branch location always displays
- 2.1.4 TABLE B Other criteria the user may enter: Unit number PO number, RO number, Claim number. (This is currently in one field.) Account name (the user can search for a account name based on, bill-to, shop, Account number (same as Account name) Renter First Name (along with Renter Last Name) Ticket Open Date Rental Vehicle License Plate Number Search by either a single group/branch, or entire group. (This is the location that opened the contract.) Note: The current group branch location always displays. The user may search by either account name or number, not by both.
- 2.1.5 The use case continues with sub flows (Renter Last Name through Ticket Number) for renter last name, renter home phone number, and ticket number (as shown in Table A). The use case can be read at any of these sub flows (a user is most likely to search by one of these criteria more often than the criteria identified in Table B). If the user chooses to search by criteria listed in Table B, the use case continues with the alternative workflows (No Ticket Found through Rental Vehicle License Plate Number).

### 2.2 Renter Name-Sub Flow

- 2.2.1 The user chooses to search for an open ticket by entering alphanumeric text in both the renter first and last name fields or just the last name field.
- 2.2.2 The system searches for a match on the text, applying from left to right on the number of characters for an open ticket by the entered renter name. (There is an implied wildcard at the end of the character set(s) entered but no leading or imbedded wildcards within the character set(s).)



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- 2.2.3 The system produces and displays the result set if one or more tickets are found.
- 2.2.4 If no open ticket(s) are found with the name entered, continue to alternate flow No Ticket Found.  
If the user enters only a first name continue at alternate flow Renter First Name Only.
- 2.2.5 The user selects to view the details of a single open ticket from the list and the use case ends at this point.

### **2.3 Renter Phone Number-Sub Flow**

- 2.3.1 The user chooses to search for an open ticket by entering a renter phone number. (The number entered must be the full number including area code.)
- 2.3.2 The system searches for an open ticket with any matching renter phone number regardless of the phone number type. (Match must be exact: no wildcard search.)
- 2.3.3 The system produces and displays the result set if one or more tickets are found.
- 2.3.4 If no open ticket(s) is found with the phone number entered, continue to alternate flow No Ticket Found.
- 2.3.5 The user selects to view the details of a single open ticket from the list and the use case ends at this point

### **2.4 Ticket Number-Sub Flow**

- 2.4.1 The user chooses to search for an open ticket by entering a ticket number.
- 2.4.2 The system searches for an open ticket with any matching ticket number. (Match must be exact: no wildcard search.) The system produces and displays the result set if one or more tickets are found.
- 2.4.3 If no open ticket is found with the ticket number entered, continue to alternate flow No Ticket Found
- 2.4.4 The user selects to view the details of a single open ticket from the list and the use case ends at this point.

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### 3. Alternative Workflows

#### 3.1 No Ticket Found

- 3.1.1 If no open ticket is found based on either the last name, phone number, ticket number, unit number, PO/RO/Claim number, account name, account number, ticket open date and the location entered, the user can continue to 2.1.3 in the main flow or choose not to perform another search and the use case ends.

#### 3.2 Renter First Name Only

- 3.2.1 The user cannot search for an open ticket by entering the renter's first name and leaving the last name field blank.
- 3.2.2 The system will not allow the user to enter a first name unless a last name is present
- 3.2.3 The use case ends and continues at the Renter Name sub flow.

#### 3.3 PO/RO/Claim Number

- 3.3.1 The user chooses to search for an open ticket by entering either a PO/RO/Claim number.
- 3.3.2 The system searches for a match on the text, applying from left to right on the number of characters for an open ticket by the entered PO/RO/Claim number. The system produces and displays the result set if one or more tickets are found.
- 3.3.3 If no open ticket(s) are returned with the entered PO/RO/Claim number, the user can continue to alternate flow No Ticket Found.
- 3.3.4 The user selects to view the details of a single open ticket from the list and the use case ends at this point.

#### 3.4 Unit Number

- 3.4.1 The user chooses to search for an open ticket by entering a unit number.
- 3.4.2 The system searches for an open ticket with any matching unit number. (Match must be exact; no wildcard search.) The system produces and displays the result set if one or more tickets are found.
- 3.4.3 If no open ticket is returned with the entered unit number, the user can continue to alternate flow No Ticket Found.
- 3.4.4 The system displays records found and the use case ends at this point.

#### 3.5 Bill-To/Shop Account Name Search

- 3.5.1 The user chooses to search for an open ticket by entering alphanumeric text in the account name field where the account could be the bill-to and/or the shop.

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- 3.5.2 The system searches for a match on the text, applying from left to right on the number of characters for an open ticket by the entered account name. (There is an implied wildcard at the end of the character set entered but no leading or imbedded wildcards within the character set.) The system produces and displays the result set if one or more tickets are found.
- 3.5.3 If no open ticket is returned with the entered referral source customer, the user can continue to alternate flow No Ticket Found.
- 3.5.4 he user selects to view the details of a single open ticket from the list and the use case ends at this point.

### **3.6 Account Number Search**

- 3.6.1 The user chooses to search for an open ticket by entering alphanumeric text in the account number field where the account could be the bill-to and/or shop.
- 3.6.2 The system searches for an open ticket by the entered account number. (Match must be exact: no wildcard search.) The system produces and displays the result set if one or more tickets are found.
- 3.6.3 If no open ticket is returned with the entered account, the user can continue to alternate flow No Ticket Found.
- 3.6.4 The user selects to view the details of a single open ticket from the list and the use case ends at this point.

### **3.7 Ticket Open Date**

- 3.7.1 The user chooses to search for an open ticket containing by entering the date that the ticket was opened.
- 3.7.2 The system searches for an open ticket by the entered ticket opening date. (Match must be exact: no wildcard search.) The system produces and displays the result set if one or more tickets are found.
- 3.7.3 If no open ticket is returned with the entered ticket opening date, the user can continue to alternate flow No Ticket Found.
- 3.7.4 When the user elects to search on a date for open contracts, the search will pull all contracts with an open contract date 1 day prior through 1 day after the user specified date.
- 3.7.5 The user selects to view the details of a single open ticket from the list and the use case ends at this point.

### **3.8 Rental Vehicle License Plate Number**

- 3.8.1 The user chooses to search for an open ticket containing by entering rental vehicle license plate number.
- 3.8.2 The system searches for an open ticket by the entered entering rental vehicle license plate

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number. (Match must be exact: no wildcard search.) The system produces and displays the result set if one or more tickets are found.

- 3.8.3 If no open ticket is returned with the entered ticket opening date, the user can continue at alternate flow No Ticket Found.
- 3.8.4 The user selects to view the details of a single open ticket from the list and the use case ends at this point.

## 4. Special Requirements

- 4.1 The user must have the ability to sort within the table.

## 5. Pre-Conditions

- 5.1 A user is authorized through a login process to access the panel that is necessary to search for open tickets.

## 6. Post-Conditions

- 6.1 <Post-condition One>

## 7. Extension Points

- 7.1 <name of extension point>

## 8. FAQ

- 8.1.1 All the current search parameters are based upon an "AND" relationship. Should the system give the user the option to search by an "OR" relationship?
- 8.1.2 Answer: No

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## ECARS 2.0 Open Ticket Use Case Specification: Referral

Version 1.5

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## Revision History

Date	Version	Description	Author
06/03/01	1.0	First Draft	M. Pallia
6/6/01	1.1	Revisions based on the input of the Open Ticket team. Revisions included some wording changes as well as the removal of the most common navigation area flow.	M. Pallia
6/7/01	1.2	Changed document to notate that it is Account Name and Legacy Customer Number	M. Pallia
6/8/01	1.3	The following changes were made during the user review: The basic flow was changed from entering a referral number to picking one from the Branch short list. Changed name to Referral from Referral Call. A customer number is a Legacy Customer Number. Account search must have 2 criteria unless it is name or phone number. Finally added special requirements 3 thru 6.	M. Pallia
6/12/01	1.4	Added the following requirement: <ul style="list-style-type: none"> <li>A new contacted cannot be added to a fleet type Account.</li> </ul> Changed the following requirement. <ul style="list-style-type: none"> <li>During the Account search, the user can select one or more account type or an all option.</li> </ul>	M. Pallia
6/15/01	1.5	Replaced Legacy Customer Number with Account Number. Added a new section that is called Future Scope that details out the functional areas we will not be delivering for Pilot	M. Pallia
8/21/01	1.6	Version transferred from Reservation to Open Ticket Repository,	D. Beebe

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## Use Case Specification: Referral

### 1. Referral Use Case

#### 1.1 Brief Description

This use case describes the interactions a user will take when a renter is referred to Enterprise by a promotional discount, an Account, a TV ad campaign or any other method of attracting Renters, or an employee of Enterprise refers a renter (Employees can refer themselves as well).

### 2. Flow of Events

#### 2.1 Basic Flow

2.1.1 This use case can be initiated at any point during the Open Ticket process.

2.1.2 Depending on the person making the Open Ticket, the user will use one of the two sub-flows. More commonly, the Account Referral Sub-flow is used.

#### 2.2 Account Referral Sub-Flow

2.2.1 The system displays an area for the user to select an Account from the Branch Short List. The system also gives the user the option to:

- Enter an Account Number. If the user chooses this option, the use case continues alternate (Account Number).
- Search for an Account. If the user selects this option, the use case continues at alternate (Account Search)

2.2.2 The system retrieves and displays the Branch Short list. The columns that are displayed to the user are (from left to right):

- Account name
- Account Number
- Account type
- Owning Group and Branch
- Address
- City
- State
- Zip
- Phone Number(s)

If the physical terminal location is in Europe, the use case continues at Alternate (European Branch Short List).

2.2.3 The user selects an account from the list. If the user does not choose an account from the list, the use case continues at (2.2.1) in the Account Referral Sub-Flow.

2.2.4 The system retrieves and displays the following information:

- Account name
- Account Number
- Account type
- Owning Group and Branch
- Address
- City



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- State
- Zip
- Phone Number(s)

2.2.5 The user has the option to select an Account contact for the selected account. select a different account or view the Account details of the selected account. If the user chooses to view "The Account Details", the use case continues at alternate (Account Details). If the user chooses to select a different account, the use case continues at alternate (2.2.1) within the Account Referral Sub-Flow.

2.2.6 The user chooses to view the list of contacts for the selected account.

2.2.7 The system displays the Account Contact list to the user. If there are no Contacts identified for a particular Account, the use case continues at alternate (No Contacts). The column displayed to the user will be the following:

- Last Name
- First Name

2.2.8 The user has the option to select a contact from the list or add a New Contact. If the user chooses to add a new contact, the use case continues at alternate (Add New Contact).

2.2.9 The user selects a contact from the list.

2.2.10 From here, the user can navigate to any other area within the Open Ticket.

2.2.11 The use case ends

### **2.3 Employee Referral Sub-Flow**

2.3.1 The system displays an area for the user to perform the following options:

- A field to enter an Employee Number
- Search for an Employee. If the user chooses to search for an Employee, the use case continues at alternate (Employee Search)

2.3.2 The user types in an employee number.

2.3.3 The user initiates the search.

2.3.4 The system checks the status of the search. If No Employee Matches are found, the use case continues at alternate (No Employee Matches) If the search results in only one match, the use case continues in this Sub-Flow.

2.3.5 The system displays the following information to the user

- Employee Name
- Group and Branch Number – Group and Branch Description
- Department
- Title

2.3.6 From here, the user can navigate to any other area within the Open Ticket.

2.3.7 The use case ends

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## 2.4 Alternative Flows

### 2.4.1 Account Search

2.4.1.1 From the Account Referral Sub-flow, the system displays an area with all the fields emptied out so that the user can enter search criteria . The fields that are available are:

- Group . This includes an "All Groups" option.
- Account Name
- Account Phone Number(s)
- Account Type . This includes an "All" option. (See Special Requirements for the list of valid Account Types)

2.4.1.2 The user enters an Account Name and selects "All" as the Account Type.

2.4.1.3 The user initiates the search

2.4.1.4 The system validates the search criteria. If only an account type is entered, the system will prompt the user that at least one other criterion must be selected. If only a group is chosen, the system will prompt the user that at least one other criterion must be selected.

2.4.1.5 The system checks the status of the search. If No Account Matches are found, the use case continues at alternate (No Account Matches).

2.4.1.6 The system displays the matches to the user in a summary list. The columns that are displayed to the user are: (from left to right)

- Account name
- Account Number
- Account type
- Owning Group and Branch
- Address
- City
- State
- Zip
- Phone Number(s)

2.4.1.7 The user can do any of the following options:

- Select an account from the summary list. If the user chooses this option, the use case continues at (2.2.6) in the Account Referral Sub-flow
- Clear the search criteria. If the user chooses this option, the use case continues at (2.5.2.1) of the Account Search Alternate.
- Search again. If the user chooses this option, the use case continues at (2.5.2.2) of the Account Search Alternate.
- Exit. If the user chooses this option, the use case continues at (2.2.2) in the Account Referral Sub-flow.

### 2.4.2 Enter an Account Number

2.4.2.1 From the Account Referral Sub-Flow, the user chooses to enter an Account Number.

2.4.2.2 The user types in an Account Number and initiates a search for all the information associated with the entered Account Number.

2.4.2.3 The system checks the status of the search . If No Account Matches are found, the use case continues at alternate (No Account matches). If More than one Account match is found, the use

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case continues at alternate (More than One Account Match). If the search results in only one match, the use case continues at (2.2.5) within the Account Referral Sub-Flow.

### **2.4.3 No Account Matches**

2.4.3.1 From the Account Referral Sub-Flow, the system displays a message to the user letting them know that No Account Matches or records were found.

2.4.3.2 The use case continues at (2.2.2) within the Account Referral Sub-Flow.

### **2.4.4 More Than One Account Match**

2.4.4.1 The system displays a summary list of the matches to the user. The columns that will be displayed in the summary list are (from left to right):

- Account name
- Account Number
- Account type
- Address
- City
- State
- Zip
- Phone Number(s)

2.4.4.2 The user has the option to select an account from the list or to exit. If the user selects an Account from the list, the use case continues at (2.2.6) within the Account Referral Sub-Flow. If the user chooses to exit the list without selecting an Account, the use case continues at (2.2.2) within the Account Referral Sub-Flow.

### **2.4.5 Account Details**

2.4.5.1 From the Account Referral Sub-Flow, the user chooses to see the details about the selected Account.

2.4.5.2 The system displays an area that shows the following details about the Account:

#### Account Details

- Account Name
- Account Number
- Account Type
- Address
- City
- State
- Zip Code
- Phone Number(s)

#### Special Instructions

- 2 "Hot" lines
- Miscellaneous Information
- Discounts
- Rules
- Products

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2.4.5.3 The user is done looking at the information and the use case continues at (2.2.6) with in the Account Referral Sub-flow.

#### **2.4.6 No Contacts**

2.4.6.1 From the Account Referral Sub-Flow, the system displays a message letting the user know that no contact have been set up for this Account

2.4.6.2 The user can either add a new contact or exit. If the user chooses to add a new contact, the use case continues at alternate (Add New Contact). If the user chooses to exit, the use case continues at (2.2.7) within the Account Referral Sub-flow.

#### **2.4.7 Add New Contact**

2.4.7.1 From the Account Referral Sub-Flow, the system displays an area for the user to enter Contact information. The fields that can be entered are either:

- Last Name
- And/or
- First Name

2.4.7.2 The user enters the first and/or last name and accepts the new contact information entered. If the user chooses to exit, the use case continues at (2.2.7) with in the Account Referral Sub-Flow.

2.4.7.3 The system associates the new contact added to the Account chosen and the use case continues at (2.2.12) with in the Account Referral Sub-Flow.

#### **2.4.8 Employee Search**

2.4.8.1 From the Employee Referral sub-flow, the user chooses to search for an employee .

2.4.8.2 The system displays an area with all the search criteria fields emptied out. The search criteria fields available for the user to enter are:

- Employee Last name
- Employee First name

2.4.8.3 The user enters a Last Name and a First name.

2.4.8.4 The user initiates the search.

2.4.8.5 The system checks the status of the search. If No Employee Matches are found, the use case continues at alternate (No Employee Matches).

2.4.8.6 The system displays the matches to the user in a summary list. The columns that are displayed to the user are: (from left to right)

- Employee Name
- Employee Number
- Group and Branch Number with Group and Branch Description
- Department
- Title

2.4.8.7 The user can do any of the following options:

- Select an employee from the summary list. If the user chooses this option, the use case continues at (2.3.5) in the Employee Referral Sub-flow
- Clear the search criteria. If the user chooses this option, the use case continues at (2.4.8.3)

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of the alternate (Employee Search).

- Search again. If the user chooses this option, the use case continues at (2.4.8.3) of the alternate (Employee Search)
- Exit. If the user chooses this option, the use case continues at (2.3.1) in the Employee Referral Sub-flow.

#### **2.4.9 No Employee Matches**

2.4.9.1 From the Employee Referral Sub-Flow or the alternate (Employee Search), the system displays that no employees match the criteria entered.

2.4.9.2 The use case continues at (2.1.3) within the Employee Referral sub-flow or (2.4.8.2) in the alternate (Employee Search).

#### **2.4.10 European Branch Short List**

2.4.10.1 From the account referral sub-flow, the system retrieves and displays the European Branch short list. (NOTE: This list is comprised of all accounts that have an owning Group that equals the Group of the Physical terminal's location.) The columns displayed to the user are:

- Account Name
- Account Number
- Account Type
- Owning Group/ Branch
- Address
- City
- State
- Zip
- Phone Number(s)

2.4.10.2 The user selects an account from the list that is displayed.

2.4.10.3 The use case continues at (2.2.4) within the account referral sub-flow.

### **3. Special Requirements –Referral UC**

1. A contact must be selected for every Account that is selected as a Referral.

2. The valid Account Types that are displayed to the user in Account Search are:

- Body Shop
- Corporate
- Government
- Fleet
- Dealership
- Insurance
- Other

3. For North America, the Branch Short List is currently being generated from the existing Legacy system and is being stored in a table on the Oracle database.

4. The system should not search or display for any deactivated or deleted accounts.

5. The user must have the ability to cancel a search at any time during the search.

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6. An account and contact or an employee number must be selected before the user can complete an open ticket.

7. If a Fleet type Account is selected, the system should not allow the user to add a new contact.

8. The system must allow the user to select one Account Type or "All" during the Account Search.

9. When a user adds a new contact, that contact must be saved to the database and be available for selection for any future transactions.

#### 4. Future Scope

- The ability to view Account Details. Account Details includes the 2 "Hot Lines", Products, Miscellaneous Information, Discounts and Rules as set up in SI.

#### 5. Pre-Conditions

5.1 The user successfully initiated the Open Rental Ticket Use Case

#### 6. Post-Conditions

#### 7. System Generated Notes –Referral

7.1 Notes should be generated when any of the following events occur \*

Event	Note Text	When to generate
<u>The user changes the Referral Account</u>	Referral Account "XXXXX" was changed to "XXXXXX"	Edit
<u>The user changes the referral contact. (The referral account is the same)</u>	Referral Contact "XXXX" was changed to "XXXX" for Referral Account "XXXX"	Edit
<u>The user adds a "not on file" contact</u>	Not on File Contact "First Name, Last Name" was added for Referral Account "XXXXX".	Create/Edit

#### 8. Extension Points

#### 9. Questions

# **Rental Redesign/ECARS 2.0**

## **Use Case Specification: Vehicle/Shop**

**Version 2.8**

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## Revision History

Date	Version	Description	Author
07/10/2001	1.0	First Draft	D. Beebe
07/12/2001	1.1	Revisions based upon feedback from meeting with Mike P. and Jackie L.	D. Beebe
7/16/2001	1.2	<p>Revisions based upon feedback from Mary S. and Jon J.</p> <ul style="list-style-type: none"> <li>• "Accident" changed to "Damage."</li> <li>• Removed steps for user choosing to search for make and model. <ul style="list-style-type: none"> <li>○ Once a user selects a Year the list of possible models are displayed.</li> <li>○ Once a user selects a Make the list of possible models is displayed.</li> </ul> </li> <li>• Removed requirement that the user must select full (year, make, model) renter vehicle information.</li> <li>• Removed enabling the "Other Make", "Other Model" and "Other Color" fields based upon selecting "Other" in the "Make", "Model" and "Color" fields.</li> </ul>	D. Beebe
7/17/2001	1.3	<p>Combined the Renter's Vehicle and Shop Use Cases back together.</p> <p>(In the GUI ECARS and the Functional Specs these two areas were combined. However when Ciber worked on the baseline code they were separated. Based upon feedback from Mary and Jon for ECARS 2.0 Renter's Vehicle and Shop were merged.)</p>	D. Beebe



7/24/2001	1.4	Updated "Add New Contact" to say that a user may enter the last and/or first name. The requirement previously stated that both were needed.	D. Beebe
7/30/2001	1.5	Added to Supplemental Requirements. Included all of the situations that the system should generate a note.	D. Beebe
8/2/2001	1.6	1) Added domains for "Type of Loss" 2) Added to Supplemental Specs that the system should generate a note when the user changes the renter's vehicle.	D. Beebe
8/3/2001	1.7	1) Added alternate "European Branch Short List" when selecting a Shop. 2) Added German Vehicle and Class information alternate flow.	D. Beebe
8/8/2001	1.8	Revision based upon feedback from Jon Jouris. Vehicle Notes will only be viewable from this screen and will not be saved to Notes.	D. Beebe
8/9/2001	1.9	Revisions based upon feedback from Chris Carr 1. Default values of drop downs is "Blank" 2. Removed step to search for full account information after selection as shop: system already did this in previous step. 3. Removed viewing full account details. 4. When selecting a "Not on File" account, added functionality to get city and state from zip/postal code.	D. Beebe
8/14/2001	2.0	1. Change Telephone to Phone. 2. Only one type of loss can be selected.	D. Beebe

8/16/2001	2.1	1. Corrected the "No Contact" alternate flow to remove EXIT option.	D. Beebe
8/20/2001	2.2	Changed name of use case from Renter's Vehicle/Shop to Vehicle/Shop	D. Beebe
08/28/2001	2.3	<ol style="list-style-type: none"> <li>1. Added "Zero Days" to list of "Theft Waiver Days".</li> <li>2. Added note that "Theft Waiver Days" is not displayed in all of Europe.</li> <li>3. Added note that the vehicle "Year" is not displayed in Europe.</li> </ol>	D. Beebe
9/4/2001	2.4	<ol style="list-style-type: none"> <li>1. Added two European requirements for system generated notes.</li> <li>2. Vehicle Year field is not present in UK or Ireland.</li> <li>3. License plate field is removed.</li> <li>4. Registration number field for Europe added.</li> <li>5. Zero theft waiver days removed.</li> <li>6. Date of Loss not required.</li> </ol>	D. Beebe
9/6/2001	2.5	Added what values are in the drop down for the class field in Germany.	D. Beebe
9/19/2001	2.6	Separated the three system generated notes for when the user changes the renter's vehicle Year, Make and/or Model.	D. Beebe
9/25/2001	2.7	Added Supplementary Spec noting what information the navigation should show.	D. Beebe

10/23/2001	2.8	<ol style="list-style-type: none"> <li>1) Removed system note the "Not on File Account XXXX has been added as a Shop"</li> <li>2) Changed system note "Not on file contact XXXX was added for Shop Account XXXX to "Not on file contact XXXX was added for Account XXXX.</li> </ol>	D. Beebe
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# Use Case Specification: Vehicle/Shop

## 1. UC15 Vehicle/Shop Use Case

### 1.1 Brief Description

This use case describes the how the user interacts with a system to indicate the renter's type of vehicle that is being repaired, notes about the vehicle, whether the vehicle is driveable, the type of loss, the date of loss and the theft waiver days. This use case also describes how the user interacts with a system to indicate which shop a renter's vehicle is being repaired at.

## 2. Flow of Events

### 2.1 Basic Flow

#### 2.1.1 *Select Vehicle/Shop*

The Vehicle/Shop Use Case begins when the user navigates to the Vehicle/Shop area of a reservation or ticket. This could be initiated at any point during the Reservation/Open Ticket process.

#### 2.1.2 *System displays the Select Vehicle, Loss Information and Select Shop Areas*

The system displays an area for the user to select and enter information about the vehicle. The fields displayed to the user are the following:

- Year (If the physical terminal location is in the U.K. and Ireland the system does not display this field.)
- Make
- Other Make
- Model
- Other Model
- Color
- Other Color
- If the physical terminal location is in Europe the system also displays the field that allows the user to enter the registration number.

If the physical terminal location is in Germany the system also displays the following field to the user:

- Class
  - (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

(The Legacy/ECARS 1.0 system does not store the registration number or the "Schwackeliste" Class in Germany.)

If the physical terminal location is in Germany also displays the following fields to the user;

- Vehicle Type
- Number of Doors
- Fuel Type
- Engine Size
- Engine Power
- Class

The system also displays an area for the user to enter and select loss information about the

vehicle. The fields displayed to the user are the following:

- Is Car Driveable?:
  - (Blank)
  - Yes
  - No
- Type of Loss:
  - (Blank)
  - Damage
  - Theft
- Total Loss
  - (Blank)
  - Yes
  - No
- Date of Loss
- Theft Waiver Days (If the physical terminal location is in Europe the system does not display this field.)
  - (Blank)
  - One Day
  - Two Days
  - Three Days

The system also displays an area for the user to enter Notes about the Vehicle.  
*The default values for the above fields is (Blank)*

The system displays an area for the user to select an account from the Branch Short List. The system also gives the user the option to:

- Enter a Legacy Customer Number. If the user chooses this option, the use case continues alternate flow Enter a Legacy Customer Number.
- Search for an Account. If the user selects this option, the use case continues at alternate flow Account Search.
- Add a "Note on File" Shop to the reservation/open ticket. If the user selects this option, the use case continues at alternate flow Add Not on File Account.

### 2.1.3 *User Decides to Search for Year*

The user initiates a search for the year a renter's vehicle was manufactured.

### 2.1.4 *System Searches for Vehicle Year*

The system retrieves and displays the list of years that a user may select from.

### 2.1.5 *User Selects the Renter's Vehicle Year*

The user selects the year of the renter's vehicle.

### 2.1.6 *System Searches for Make*

The system retrieves and displays the list of possible makes to choose from for the previously selected (vehicle) year.

### 2.1.7 *User Selects the Make*

The user selects the make of the renter's vehicle. The user can also choose to select "Other" and/or enter text in the "Other Make" field.

### 2.1.8 *System Searches for Model*

The system retrieves and displays the list of possible models to choose from for the previously

selected make.

**2.1.9 User Selects the Model**

The user selects the model of the renter's vehicle. The user can also choose to select "Other" and enter text in the "Other Model" field. If the physical terminal location is in Germany, the use case continues at Alternate Flow German Vehicle and Class Information.

**2.1.10 System displays Colors**

The system retrieves and displays the list of colors to choose from.

**2.1.11 User Selects the Color**

The user selects the color of the renter's vehicle. The user can also choose to select "Other" and enter text in the "Other Color" field.

**2.1.12 User Enters the Vehicle Note**

The user enters the a note about the renter's vehicle.

**2.1.13 User Selects and Enters the Loss Information**

The user selects whether the car is driveable, the type(s) of loss and the date of loss. If the user selects "Theft" as a type of loss the use case continues at alternate flow Theft Waiver Days.

**2.1.14 User Selects to display Branch Short List**

The user selects the option to display the branch short list.

**2.1.15 System displays Branch Short List**

The system retrieves and displays the Branch Short list. The columns that are displayed to the user are (from left to right).

- Account name
- Legacy Customer Number (called Account Number in ECARS 2.0)
- Account type
- Owning Group and Branch
- Address
- City
- State
- Zip
- Phone Number(s)

If the physical terminal location is in Europe, the use case continues at Alternate Flow European Branch Short List.

*(If possible, any previously selected Referral or Bill-To source that is a "Dealer", Body Shop" or "Other" Account Type should be displayed at the top of the Branch Short List. The rest of the Branch Short List should be displayed below that alphabetically.)*

**2.1.16 User selects Account from Branch Short List**

The user selects an account from the list. If the user does not choose an account from the list, the use case continues at alternate flow Account Search.

**2.1.17 System Displays Contacts**

The system displays the list of Contacts for the selected Account to the user along with "Unknown". (All Accounts have a listing of "Unknown" as a Contact.)

The column displayed to the user will be the following:

- Last Name

- First Name

If there are no Contacts identified for a particular Account besides "Unknown", the use case continues at alternate flow No Contacts.

#### 2.1.18 *Option to Select Contact or Add New Contact*

The user has the option to select a contact from the list or add a New Contact.

#### 2.1.19 *User Selects Contact*

The user selects a contact from the list. If the user chooses to add a new contact, the use case continues at alternate flow Add New Contact.

#### 2.1.20 *User Selects to Exit the Vehicle/Shop Area*

The user selects to exit the Vehicle Area/Shop. *(From here, the user can navigate to any other area within the Reservation/Open Ticket.)*

#### 2.1.21 *Validation of the Date of Loss and Theft Waiver Days*

The system validates the value in the date of loss field. If a date of loss is not valid because:

- The date does not exist (February 30)
- The date is greater than today's date.

the use case continues at alternate flow Invalid Date Value.

#### 2.1.22 *End*

The use case ends.



## **2.2 Alternative Flows**

### **2.2.1 German Vehicle and Class Information**

- 2.2.1.1 The system retrieves and displays the list of Vehicle Types that a user may select from for the previously selected model.
- 2.2.1.2 The user selects the Type of the renter's Vehicle.
- 2.2.1.3 The system retrieves and displays the list of Number of Doors that a user may select from for the previously selected Vehicle Type.
- 2.2.1.4 The user selects the Number of Doors for the renter's vehicle.
- 2.2.1.5 The system retrieves and displays the list of Fuels that a user may select from for the previously selected Number of Doors for the renter's vehicle.
- 2.2.1.6 The user selects the Fuel type for the renter's vehicle.
- 2.2.1.7 The system retrieves and displays the list of Engine Sizes that a user may select from for the previously selected Fuel type for the renter's vehicle.
- 2.2.1.8 The user selects the Engine Size for the renter's vehicle.
- 2.2.1.9 The system retrieves and displays the list of Engine Powers that a user may select from for the previously selected Engine Size for the renter's vehicle.
- 2.2.1.10 The user selects the Engine Power for the renter's vehicle.
- 2.2.1.11 The system retrieves and displays the Class for the renter's vehicle.
- 2.2.1.12 The use case continues at System displays Colors in the basic flow.

### **2.2.2 Theft Waiver Days**

- 2.2.2.1 When the user selects "Theft" as a type of loss, the system enables the "Theft Waiver Days" field.
- 2.2.2.2 The user selects the number of theft waiver days.
- 2.2.2.3 The use case returns to User Selects to Exit the Vehicle/Shop Area in the basic flow.

### **2.2.3 Invalid Date Value**

- 2.2.3.1 The system displays a feedback message that the "Date is invalid".
- 2.2.3.2 The system prompts the user to correct the date.
- 2.2.3.3 The user selects to correct the date and the use case returns to User Selects and Enters the Loss Information in the basic flow.

## **2.2.4 European Branch Short List**

2.2.4.1 The system retrieves and displays the European Branch short list. (NOTE: This list is comprised of all accounts that have an owning Group that equals the Group of the physical terminal location.) The columns displayed to the user are :

- Account Name
- Account Number
- Account Type
- Owning Group/Branch
- Address
- City
- State
- Zip
- Phone Numbers.

2.2.4.2 The user selects an account from the list that is displayed.

2.2.4.3 The use case continues at User selects Account from Branch Short List in the basic flow.

## **2.2.5 Account Search**

2.2.5.1 The system displays an area with all the fields emptied out so that the user can enter search criteria. The fields that are available are:

- Group. This includes an "All Groups" option.
- Account Name
- Account Phone Number(s)
- Account Type. This includes an "All" option. (See Special Requirements for the list of valid Account Types)

2.2.5.2 The user enters an Account Name and selects "All" as the Account Type.

2.2.5.3 The user initiates the search.

2.2.5.4 The system validates the search criteria. (If only an account type is entered, the system will prompt the user that at least one other criterion must be selected. If only a group is chosen, the system will prompt the user that at least one other criterion must be selected.)

2.2.5.5 The system checks the status of the search. If No Account Matches are found, the use case continues at alternate flow No Account Matches.

2.2.5.6 The system displays the matches to the user in a summary list. The columns that are displayed to the user are: (from left to right)

- Account name
- Legacy Customer Number (called Account Number in ECARS 2.0)
- Account type
- Owning Group and Branch
- Address
- City
- State
- Zip
- Phone Number(s)

2.2.5.7 The user has the following options:

- Select an account from the summary list.
- Clear the search criteria.

- Search again.
- Exit.

2.2.5.8 If the user chooses to select an account from the summary list, the use case continues at System Displays Contacts in the basic flow. If the user chooses to clear the search criteria, the use case continues at the first step in alternate flow Account Search. If the user chooses to search again, the use case continues at the first step in alternate flow Account Search. If the user chooses to exit, the use case continues at System displays Branch Short List in the basic flow.

## **2.2.6 Enter a Legacy Customer Number**

2.2.6.1 From the Basic Flow, the user chooses to enter a Legacy Customer Number.

2.2.6.2 The user types in a Legacy Customer Number and initiates a search for all the information associated with the entered Legacy Customer Number.

2.2.6.3 The system checks the status of the search. If No Account Matches are found, the use case continues at alternate flow No Account Matches. If More than one Account match is found, the use case continues at alternate flow More Than One Account Match. If the search results in only one match, the use case continues at System Displays Contacts in the basic flow.

## **2.2.7 No Account Matches**

2.2.7.1 From the basic flow, the system displays a message to the user letting them know that No Account Matches or records were found.

2.2.7.2 The use case continues at System displays the Select Vehicle, Loss Information and Select Shop Areas in the Basic Flow.

## **2.2.8 More Than One Account Match**

2.2.8.1 The system displays a summary list of the matches to the user. The columns that will be displayed in the summary list are (from left to right):

- Account name
- Legacy Customer Number
- Account type
- Address
- City
- State
- Zip
- Phone Number(s)

2.2.8.2 The user has the option to select an account from the list or to exit. If the user selects an Account from the list, the use case continues at System Displays Contacts in the basic flow. If the user chooses to exit the list without selecting an Account, the use case continues at System displays Branch Short List in the basic flow.

## **2.2.9 Add Not on File Account**

2.2.9.1 The system displays an area for the user to enter Account information for an account that is not on file. The fields that must be entered are:

- (Account) Name

- (Street) Address
- Zip
- Phone Number
- City
- State
- Zip
- Contact Last Name
- Contact First Name

2.2.9.2 The user enters the (Account) Name, (Street) Address, Zip/Postal Code and Phone Number.

2.2.9.3 The system displays the option to search for the City and State/Province based upon the Zip/Postal Code and Country.

2.2.9.4 The user selects the option and the system performs the search for the City and State/Province that match the Zip/Postal Code and Country.

2.2.9.5 The system produces a single City and State/Province result and continues at the next step in the basic flow. If the search produces no matching City and State/Province information, the use case continues at alternate flow No Match to Zip/Postal Code. If the search produces multiple cities the use case continues at alternate flow Multiple City Results.

2.2.9.6 The system populates the City and State/Province fields. The system also makes the information in these fields available for edit.

2.2.9.7 The system associates the Not on File account to the reservation/ticket and the use case continues at alternate flow Add New Contact. If the user chooses to exit, the use case continues at System Displays Contacts in the basic flow.

2.2.9.8 The system associates the new contact added to the Account chosen and the use case continues at User Selects to Exit the Vehicle/Shop Area in the basic flow.

## **2.2.10 No Match to Zip/Postal Code**

2.2.10.1 The system displays a feedback message that the zip/postal code does not produce matching city and state/province information.

2.2.10.2 The system prompts the user to manually enter city and state/province information.

2.2.10.3 The user selects to manually enter city and state/province information and the use case proceeds back to 2.2.9.7 in the alternate flow Add Not on File Account.

## **2.2.11 Multiple City Results**

2.2.11.1 The system displays a feedback message that the Zip/Postal code produces more than one matching city.

2.2.11.2 The system displays the list of cities and prompts the user to select a City.

2.2.11.3 The user selects a City from the list and the use case proceeds back to 2.2.9.7 in the alternate flow Add Not on File Account.

## **2.2.12 No Contacts**

2.2.12.1 From the basic flow, the system displays a message letting the user know that no contacts have

been set up for this Account. (All Accounts have a listing of "Unknown" as a contact. The message will display when "Unknown" is the only contact present.)

2.2.12.2 The user can :

- Add a new contact.
- Select a contact of "Unknown"
- 

2.2.12.3 1 If the user chooses to add a new contact, the use case continues at alternate flow Add New Contact. If the user selects a contact of "Unknown", the use case continues at User Selects to Exit the Vehicle/Shop Area in the Basic Flow.

### 2.2.13 Add New Contact

2.2.13.1 From the basic flow, the system displays an area for the user to enter Contact information. The fields that must be entered are:

- Last Name
- And/or
- First Name

2.2.13.2 The user enters a first and/or last name and accepts the new contact information entered. If the user chooses to exit, the use case continues at System Displays Contacts in the basic flow.

2.2.13.3 The system associates the new contact added to the Account chosen and the use case continues at User Selects to Exit the Vehicle/Shop Area in the basic flow.

## 3. Special Requirements – Vehicle/Shop Use Case

- 1) Year, Make and Model domain values come from the database.
- 2) The list of years that the renter's vehicle was manufactured will be listed in descending order.
- 3) The note entered into the Vehicle Notes field should be viewable from the Vehicle Notes section of the Vehicle/Shop screen. They WILL NOT be viewable from the Notes screen/use case..
- 4) A contact must be selected for every Account that is select as a Shop.
- 5) The valid Account Types that are displayed to the user in Account Search are:
  - o Body Shop
  - o Corporate
  - o Government
  - o Fleet
  - o Dealership
  - o Insurance
  - o Other
- 6) The Branch Short List is currently being generated from the existing Legacy system and is being stored in a table on the Oracle database.
- 7) The system should not search or display for any deactivated or deleted accounts.
- 8) The user must have the ability to cancel a search at any time during the search.
- 9) The Navigation Bar for the Vehicle/Shop area should display the following:
  - a. Line 1: Year, Make and Model of Renter's Vehicle
  - b. Line 2: Shop Account Name
- 10) Notes should be generated when any of the following events occur:

The user adds a "Not on File" contact.	Not on file contact "First Name Last Name" was added for Account "XXXXX"	Create/Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
The user changes the shop account.	Shop "XXXX" was changed to "XXXX".	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
The user changes the type of loss.	Type of loss "XXXX" was changed to "XXXX".	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop

1. The user adds a "Not on File" contact.  
 2. The user changes the shop account.  
 3. The user changes the type of loss.

The user changes the "Total Loss?".	Total Loss "XXXX" was changed to "XXXX".	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
The user changes the date of loss.	Date of loss "XXXXXX" was changed to "XXXXXX".	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
The user changes number of theft waiver days.	Theft waiver days "X" was changed to "X"	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
The user changes the renter's vehicle Year.	The renter's vehicle Year "XXXX", was changed to Year "XXXX".	Edit	Edit	Vehicle/Shop
The user changes the renter's vehicle Make.	The renter's vehicle Make "XXXX", was changed to Make "XXXX".	Edit	Edit	Vehicle/Shop
The user changes the renter's vehicle Model.	The renter's vehicle Model "XXXX" was changed to Model "XXXX".	Edit	Edit	Vehicle/Shop
The user changes the registration number of the renter's vehicle. (If the physical terminal location is in Europe.)	The renter's vehicle registration number "XXXX" was changed to "XXXX".	Edit	Edit	Vehicle/Shop
The user changes the class of the renter's vehicle. (If the physical terminal location is in Germany.)	The renter's vehicle class "X" was changed to "X".	Edit	Edit	Vehicle/Shop

#### 4. Pre-Conditions

- A user is authorized through a login process to create or edit a reservation or ticket.
- The user has accessed a reservation or ticket, either in the process of editing or creating.

#### 5. Post-Conditions

#### 6. Questions

Not the door being

Edit View Help

Use Cases

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Allocate Charges  
Calculate Total Charges  
Get Rates  
Rate Verification  
Rates Window  
Retrieve Rates  
Selection of Special Rates

Name	Size	Type	Modified
Allocate Charges	133KB	Microsoft Word Document	12/20/01 3:06 PM
Calculate Total Charges	147KB	Microsoft Word Document	12/20/01 3:10 PM
Get Rates	71KB	Microsoft Word Document	12/20/01 3:14 PM
Rate Verification	87KB	Microsoft Word Document	12/20/01 3:31 PM
Rates Window	94KB	Microsoft Word Document	12/20/01 3:47 PM
Retrieve Rates	92KB	Microsoft Word Document	12/20/01 3:39 PM
Selection of Special Rates	96KB	Microsoft Word Document	12/20/01 3:43 PM

7 object(s)

718KB

0(s) selected



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# **Enterprise Rent-A-Car**

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## **Rental Redesign/ECARS 2.0 Business Use-Case Specification: Allocate Charges**

**Version 2.0**

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# Enterprise Rent-A-Car

## Revision History

Date	Version	Description	Author
02/28/01	1.0	First Draft	David Beebe
03/01/01	1.1	1 <sup>st</sup> Revision	David Beebe
03/02/01	1.2	2 <sup>nd</sup> Revision	David Beebe
03/15/01	1.3	3 <sup>rd</sup> Revision-added tables from calculate charges, and sub flows	Allison Bruhn
03/16/01	1.4	4 <sup>th</sup> Revision-incorporate changes after meeting with Jeff Roderick	Allison Bruhn
03/27/01	1.5	5 <sup>th</sup> Revision-minor changes from Carla's suggestions, link changes; alterations to basic and alternative flows,	Allison Bruhn
04/05/01	1.6	6 <sup>th</sup> Revision-incorporate changes from Maribeth Concannon in basic and alternate flows	Allison Bruhn
04/25/01	1.7	7 <sup>th</sup> Revision-took out wording related to system calculates or determines since this information is received when this use case calls the calculate total charges use case; removed table and added wording in (1.1.);removed subflows-they are now included in the main flow (2.2 sub-flows removed); added wording "if allocate charges is called for reservation see alternate flow Reservation; added table in 2.1.2 and more detail and examples; changed "a" system to "the" system (2.1.1); removed table in 2.1.3 and put in "system calls the calculate charges use case"; changed wording in main flows 2.1.7 thru 2.1.14 to read consistently; added alternate flows 2.2.3 Reservation, 2.2.4 Close-Pend, 2.2.5 Vehicle Amount, 2.2.6 Additional Distance Driven, 2.2.7 Amount due for fuel, 2.2.8 Callback; added links	Allison Bruhn
05/02/01	1.8	8 <sup>th</sup> Revision-removed table format for Authorization Information (2.1.2) and left as text; changed wording in 2.1.3 surrounding est. total charges use case called; changed wording in main flows from Vehicle Amount section to Miscellaneous Fees; added several alternate flows; added mathematical formulas in sections Multiple bill-To's, Partial Vehicle Amount; Taxes/Surcharges	Allison Bruhn
05/30/2001	1.9	9 <sup>th</sup> Revision-in all the flow added the wording "authorized"; moved alternate flows reservation, callback, open ticket and close pend to the end of	Allison Bruhn

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the alternate flow section; put into Req Pro

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# Enterprise Rent-A-Car

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## Business Use-Case Specification: Allocate Charges

### 1. Allocate Charges

#### 1.1 Brief Description

The purpose of this use case is to explain what the system does to allocate charges among responsible parties for a given rental. The Allocate Charges Use Case includes information from the Calculate Total Charges Use Case and shows the flow of events that will occur when the Allocate Charges function is utilized in the Reservation, Open Ticket, Callbacks and Close Ticket processes.

#### 2. Flow Of Events

##### 2.1 Basic Workflow

###### 2.1.1 The System Is Called

This use case begins when the system is called to allocate charges to each responsible party for a given rental during the closing of a ticket. If there is no bill-to the renter is responsible for the total charges, see alternate flow Renter Responsible. If the allocate charges is called for a reservation, see alternate flow Reservation. If the allocate charges is called for an open ticket see alternate flow Open Ticket. If the allocate charges is called for a callback, see alternate flow Callback. If a ticket is close-pended see alternate flow Close-Pend.

###### 2.1.2 Bill-To Authorization Information (possible Scenarios)

In order to allocate charges successfully, the system must have access to specific information associated with each bill-to. The information below is intended to provide helpful definitions with regards to authorization information. *Note: Authorization dates can change during the course of a rental.*

###### Authorized Charges Start and End Dates

These dates apply and may vary for the unit, products, additional fees, taxes and surcharges. For example, a bill-to may authorize payment for a rental vehicle on a Monday, but authorize protection two days later. On the same token, a bill-to may stop paying for protection while continuing to pay for the rental vehicle.

###### Authorized Maximum Daily Amount

Amount of authorization may vary. A bill-to does not necessarily authorize the same daily rate through the duration of the rental period. For example, a bill-to may initially authorize an intermediate sized car. A week into the rental the bill bill-to may authorize a mini-van.

###### Authorized Maximum Billable Amount

An amount that the bill-to sets as the maximum they will be billed. For example, the total amount of the rental may be \$1000, but the maximum billable amount is \$750.

###### No Maximum Amount

The bill-to has set no maximum. This will most likely occur in the case of a claimant.

###### Authorized Car Class Amount

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# Enterprise Rent-A-Car

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The amount the bill-to will pay for a car class. For example, if a bill-to has authorized an intermediate sized car and the renter chooses to upgrade to a full size car, the system allocates the amount for the intermediate sized car charges to the bill-to and the difference to the renter.

## Authorized Products and Amount

The amount a bill-to will authorize to pay for products. For example, a bill-to may authorize payment for a baby seat, but not for ski racks. The system also looks at the dates associated with each authorized product.

## Authorized Protection and Amount

The amount a bill-to will authorize for protection. The system also looks at the dates associated with the protection that has been authorized.

## Authorized Additional Fees and Amount

The amount a bill-to will authorize for additional fees. The system also looks at the dates associated with the additional fee that has been authorized.

## Authorized Taxes and Surcharges

The amount a bill-to will authorize for taxes and surcharges per line item.

## Authorized Percentage

The amount (as a percent) authorized by a bill-to. For example, a bill-to may pay 80% of the total amount.

### 2.1.3 Calculate Total Charges Use Case Called

In order to successfully allocate charges, the system will include the calculate total charges use case. The calculate total charges use case previously determined the total amounts for each unit on a ticket as well as any amounts for additional distance driven, fuel, products, additional fees, protection, taxes and surcharges and miscellaneous fees .

### 2.1.4 Amount(s) To Be Allocated

The system allocates the total charges to the primary bill-to. If the primary bill-to is responsible for an amount that is less than the total, the remaining charges will be allocated to the responsible party or parties. The system will show the amount allocated per charge item . If there is more than one bill-to see alternate flow multiple bill-to's.

### 2.1.5 Vehicle Amount

The authorized vehicle amount is allocated to the primary bill-to. This amount may be a flat amount, an amount plus taxes/surcharges, or a percentage of an amount. If the bill-To is paying less than the total amount of the vehicle, see alternate flow Partial Vehicle Amount . If the bill-to is paying for the entire amount of the vehicle the use case continues to the next step.

### 2.1.6 Distance Driven

If the bill-to has not authorized to pay for additional distance driven go to alternate flow limited distance. If unlimited distance is assigned to the ticket, the main flow continues at the next step.

### 2.1.7 Fuel

If the bill-to has not authorized to pay for any fuel charges go to alternate flow Fuel Charge. If there are no charges for fuel, the main flow continues at the next step.

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# Enterprise Rent-A-Car

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## 2.1.8 Additional Products

If the bill-to has not authorized to pay for any additional products go to alternate flow Additional Product Charge. If there are no charges for additional products, the main flow continues at the next step.

## 2.1.9 Additional Fees

If the bill-to has not authorized to pay for any additional fees go to alternate flow Additional Fees Charge. If there are no charges for additional fees, the main flow continues at the next step.

## 2.1.10 Protection Charges

If the bill-to has not authorized to pay for any protection go to alternate flow Protection Charges. If there are no charges for protection, the main flow continues at the next step.

## 2.1.11 Taxes/Surcharges

If the bill-to has not authorized to pay for any taxes/surcharges go to alternate flow Taxes/Surcharges Charges. If there are no taxes/surcharges applied, the main flow continues at the next step.

## 2.1.12 Miscellaneous Fees

If the bill-to has not authorized to pay for any miscellaneous fees go to alternate flow Miscellaneous Fees Charges. If there are no miscellaneous fees applied, the main flow continues at the next step.

## 2.1.13 The use case ends.

The total amount has been allocated to the primary bill-to.

## 2.2 Alternative Workflows

### 2.2.1 Multiple Bill-To's

If there are multiple bill-to's the system looks at each non-primary bill-to and allocates the amount each bill-to is responsible for (beginning with the secondary bill-to, followed by the tertiary, etc.). The use case continues at Vehicle Amount in the main flow. For more information, see Mathematical Formulas Primary, Secondary, and Renter Mathematical Formula and Primary and Secondary Bill-To Mathematical Formula.

### 2.2.2 Renter Responsible

If no authorizations exist, the system allocates the total amount to the renter.

### 2.2.3 Partial Vehicle Amount

The system allocates any amount of the vehicle, not authorized by the primary bill-to, to the responsible party. For additional information see Mathematical Formula Primary Bill-To, Renter Mathematical Formula.

### 2.2.4 Limited Distance

The system allocates any amount for additional distance driven, not authorized by the primary bill-to, to the responsible party.

### 2.2.5 Fuel Charge

The system allocates any amount for fuel charges, not authorized by the primary bill-to, to the responsible party.

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# Enterprise Rent-A-Car

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## 2.2.6 Additional Product Charge

The system allocates any amount for additional products, not authorized by the primary bill-to, to the responsible party .

## 2.2.7 Additional Fees Charge

The system allocates any amount for additional fees, not authorized by the primary bill-to, to the responsible party .

## 2.2.8 Protection Charges

The system allocates any amount for protection charges, not authorized by the primary bill-to, to the responsible party .

## 2.2.9 Taxes/Surcharges Charges

The system allocates any amount for any taxes/surcharges, not authorized by the primary bill-to, to the responsible party .. For more information see Taxes/Surcharges Mathematical Formula.

## 2.2.10 Miscellaneous Fees Charges

The system allocates any amount for miscellaneous fees, not authorized by the primary bill-to, to the responsible party .

## 2.2.11 Reservation

There are certain variables that will not be known at the time of a reservation that may or may not be relevant to allocating charges. For example, at the time the reservation is taken, actual distance driven will not be known. If limited distance is given to the renter, and distance the renter drives goes over what is allowed, someone will have to be responsible for that amount and it will be allocated to either the renter or a bill-to. When closing the ticket, this amount will be allocated to the correct party.

## 2.2.12 Callback

In the case of a callback the system allocates charges based on the information available. However, until the ticket is actually closed, the exact amount(s) to be allocated will not be known.

## 2.2.13 Open Ticket

When a ticket is opened the system can allocate charges based on the information given at that time. However, until the ticket is actually closed, certain information (i.e. distance driven, fuel, protection, etc.) may change affecting the allocation.

## 2.2.14 Close-Pend

In the case of a close-pend, the system does not have access to all the Authorization Information as documented above and the ticket cannot be closed completely and charges cannot be allocated until the information is received (for example, ending miles or an extension from a bill-to on an authorization).

## 2.2.15 The use case ends.

The system has allocated charges to each responsible party.

## 3. **Special Requirements**

### 3.1 **<First special requirement>**

## 4. **Pre-Conditions**

It is expected that information received will have been already validated since no validation will be taking place in the allocation engine.



# Enterprise Rent-A-Car

A user must initiate an event triggering a process requiring allocating charges to be displayed. This event may be calling an allocating charges panel or a payment panel.

## 5. Post Conditions

### 5.1 <Post-condition One>

## 6. Extension Points

### 6.1 <name of extension point>

## 7. Questions

## 8. Mathematical Formulas

### 8.1 Primary, Secondary, and Renter Mathematical Formula

A renter is in a standard size vehicle for 5 days (calendar billing cycle) at a rate of \$30.00 per day. The primary bill-To will only pay \$25 a day flat towards a vehicle. The secondary bill-To agrees to pick up the difference in the cost of the vehicle, which is \$5.00 a day. In addition there is a tax of 5% applicable to the entire rental, which is the renter's responsibility. The bill-to's will pay for the rate only, excluding the 5% tax.

Authorized By:	Monday	Tuesday	Wednesday	Thursday	Friday
Primary bill-To (bill-To 1) Amount Authorized Per Day $\$125 = \$25 \times 5 \text{ days}$	\$25	\$25	\$25	\$25	\$25
Secondary bill-To (bill-To 2) Amount Authorized Per Day $\$25 = \$5 \times 5 \text{ days}$	\$5	\$5	\$5	\$5	\$5
Renter Responsibility Per Day $\$7.50 = \$1.50 \times 5 \text{ days}$	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50

### 8.2 Primary and Secondary Bill-To Mathematical Formula

A renter is in a vehicle for six days using a 24-hour billing cycle. The rate is \$25.00 a day plus taxes at 7.25%. The primary bill-To is authorizing to pay \$25.00 a day plus the 7.25% for the first four days. The secondary bill-To is authorizing to pay \$25.00 a day plus the 7.25% for the next two days.

Authorized By:	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Primary bill-To (bill-To 1) Amount Authorized Per Day $\$107.25 = (\$25 \times 4 \text{ days}) \times (7.25\%)$	\$25 + 7.25%	\$25 + 7.25%	\$25 + 7.25%	\$25 + 7.25%		
Secondary bill-To (bill-To 2) Amount Authorized Per Day $\$53.625 = (\$25 \times 2 \text{ days}) \times (7.25\%)$					\$25 + 7.25%	\$25 + 7.25%
Renter Responsibility Per Day Zero Amount Allocated to Renter	0	0	0	0	0	0

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# Enterprise Rent-A-Car

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## 8.3 Primary Bill-To, Renter Mathematical Formula

The primary bill-to authorizes \$25.99 a day for a standard sized vehicle plus 5% tax on that amount. However, the renter chooses to upgrade into a full-size vehicle of \$28.99 a day and is responsible for the difference. The rental is for five days.

$$\underline{\underline{\$28.99 \times 5 \text{ days} \times .05 = 152.20}}$$

$$\underline{\underline{\text{Primary bill-to: } \$25.99 \times 5 \text{ days} \times .05 = 136.45}}$$

$$\underline{\underline{\text{Renter: } \$3 \times 5 \times .05 = 15.75}}$$

## 8.4 Taxes/Surcharges Mathematical Formula

In this example, the primary bill-to has authorized to pay \$23.99 a day plus a 5% sales tax for a duration of 5 days. However, there is also a 10% stadium tax that the bill-to will not pay for and the renter is responsible for.

$$\underline{\underline{(\$23.99 \times 5 \text{ days}) \times (10\%) \times (5\%) = \$137.94}}$$

$$\underline{\underline{\text{Bill-To: } \$125.95 = (\$23.99 \times 5 \text{ days}) \times (5\%) = \$125.95}}$$

$$\underline{\underline{\text{Renter: } \$137.94 - \$125.95 = \$11.99}}$$

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# Enterprise Rent-A-Car

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## Rental Redesign/ECARS 2.0 Business Use-Case Specification: Calculate Total Charges

Version 1.9

your firm, state, and your name in  
the left margin and call it  
"Enterprise Rent-A-Car".

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## Revision History

Date	Version	Description	Author
02/28/01	1.0	1 <sup>st</sup> Draft	Allison Bruhn
03/02/01	1.1	1 <sup>st</sup> Revision	Allison Bruhn
03/05/01	1.2	2 <sup>nd</sup> Revision	Allison Bruhn
03/15/01	1.3	3 <sup>rd</sup> Revision-changed table, added sub flows, moved original main flows into alternative flows, created hyperlinks to the definitions doc	Allison Bruhn
03/16/01	1.4	4 <sup>th</sup> Revision-changed table, minor changes based on meeting with Jeff Roderick	Allison Bruhn
03/29/01	1.5	5 <sup>th</sup> Revision-minor changes with Carla Lambrecht's suggestions, changed links	Allison Bruhn
04/03/01	1.6	6 <sup>th</sup> Revision-minor changes based on suggestions from Maribeth Concannon	Allison Bruhn
04/20/01	1.7	7 <sup>th</sup> Revision-Changed the wording from "a system" to "the system" (2.1.1); added a rental application is what will be calling the system (2.1.1); encapsulated the words hourly, daily, weekly, and monthly charges into one term "charge frequency" (2.1.2); in table A1, reworded additional distance charge and total distance driven; elaborated on the description of "a unit" (2.1.4); changed the wording of "calculating" to "determine" rates (2.1.4); reworked the mathematical calculation (2.1.5); outstanding question regarding which rate to use when two rates apply on the same calendar day (2.1.6); added statement "discounts cannot exceed more than 50% of total charges (2.2.6); added text around staggered rates (2.2.8); added alternative flow for 24 hour billing cycle (2.2.12); added another example to the fuel mathematical formula	Allison Bruhn
05/01/01	1.8	Put all mathematical formulas at the end; redid some links; cleaned up	Allison Bruhn
05/23/01	1.9	Added ARMS, and ERAC.com to main flow use case begins; removed Date of Loss from Table A1; moved theft waiver to table C-discounts; added rate source to 2.1.3 Unit Information; removed 2.1.12 taxes and surcharges information; added tax exempt to 2.1.14 tax rules processing; removed 2.2.3 theft waiver; added the option of 'pre-paid' to alternate flow fuel; added to req pro	Allison Bruhn

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## Business Use-Case Specification: Calculate Total Charges

### 1. Calculate Total Charges

#### 1.1 Brief Description

The purpose of this use case is to explain what the system does to determine total charges for a given rental transaction. The calculate total charges function can be utilized during the reservation, open ticket, close ticket and/or callback process. The system determines and presents total charges used to quote a renter or account and may be used for payment or deposit information.

### 2. Flow of Events

#### 2.1 Basic Workflow

##### 2.1.1 Use Case Begins

The use case begins when a rental application calls the system (ECARS, NatRes, ARMS, www.enterprise.com) to calculate total charges at the close of a ticket. If the calculate total charges function is called for a reservation, see alternate flow Reservation. If the calculate total charges function is called for an open ticket, see alternate flow Open Ticket. If the calculate total charges is called for a callback, see alternate flow Callback. If a ticket is close-pended, see alternate flow Close-Pend.

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### 2.1.2 Groupings A-G

Grouping A contains the minimum vehicle information that is required to determine total charges upon closing a ticket . Grouping A1 contains information pertaining to the rental unit that may or may not affect total. For example, a renter may have been given limited distance but exceeds the given limit. In this case, an amount will apply for the additional distance driven. However, if in the same scenario, the renter was given unlimited driving distance, there would be no amount affecting the total charges .

Groupings B-G contain other criteria that may or may not be used when determining the total charges .

#### Grouping A-Unit Information (required)

- Group Branch
- Start charges date (a renter could pick up a car on a Monday but for some reason the charges for the vehicle may not begin until the following day)
- End charges date
- Any rate changes associated with the unit (i.e., if the renter switched into a different car class resulting in a rate change, a weekend special)
- Charge Frequency
- Billing cycle (24 hour or calendar day)

(Note: if a daily rate is used exclusively, the weekly and monthly rates are not required)

#### Grouping A1-Unit Information (factors that may or may not effect total charges)

- Beginning odometer reading
- Ending odometer reading
- Total distance driven (the system determines the total distance driven and whether or not limited or unlimited distance is applicable additional distance charges may or may not apply)
- Additional distance charge (if a limited distance if applicable any additional distance driven will result in a additional charge total)
- Beginning fuel level
- Ending fuel level

#### Grouping B-Product Information

- Start charges date
- End charges date
- Duration of product
- Daily rate of product
- Weekly rate of product
- Monthly rate of product
- Rate of product per rental

#### Grouping C-Discounts

- Start date of discount
- End date of discount
- Duration of discount
- Is discount off daily rate
- Is discount off weekly rate
- Is discount off monthly rate
- Is discount off entire rental
- Is there more than one discount
- Is it an employee/employee's family discount?



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- Theft waiver (note: theft waiver will not apply on a retail ticket situation- see alternate flow Theft Waiver)

#### Grouping D-Additional Fees

- Start date of fee
- End date of fee
- Duration of fee
- Is fee charged daily
- Is fee charged weekly
- Is fee charged monthly
- Is fee per rental
- Is there more than one fee

#### Grouping E-Protection

- Start date of protection
- End date of protection
- Duration of protection
- What type(s) of protection (CDW, PAI, SLP)

#### Grouping F-Applicable Taxes and Surcharges

- Start date of tax and/or surcharge
- End date of tax and/or surcharge
- Duration of tax and/or surcharge
- Is there more than one tax and/or surcharge

#### Grouping G-Miscellaneous Fees and Refunds

- Amount of fee or refund per rental
- Drop fee

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### 2.1.3 Unit Information (from Grouping A)

In determining the charges associated with the unit at the closing of a ticket, the system looks at the following information:

- the date a unit was rented and the date a unit was returned (The system does this for every unit found on a rental ticket as there may be multiple units assigned to one ticket)
- whether or not the date a unit went out is equal to the date the charges for that unit started. If the start charges date is different than the date the unit went out, see alternate flow Start Charges if Different Date.
- Rate source
- the billing cycle associated with the open ticket and whether a 24-hour or a calendar day cycle is in place .

### 2.1.4 Multiple Rates

If a ticket contains more than one set of rates (due to a unit switch either requested by the renter or the renting branch, a weekend special, change in rate source, or any other reason) the system looks at all the associated rates. The system will calculate the total charges based on the number of days associated with each rate (there may be just one rate, but there may be multiples) .

### 2.1.5 Calendar Day Cycle

If a calendar day billing cycle has been selected, the system returns a daily rate . If a 24 hour billing cycle has been selected see alternate flow 24 hour Billing Cycle. The system will look at the start charges date and end charges date and this total number of days will be multiplied by the daily rate of the vehicle. If multiple rates exist (due to a unit switch or any another reason), the system will look at the number of days a particular rate applies and determine the total charges for each rate

### 2.1.6 Fuel Information

The system finds no charges for fuel and the use case continues at the next step. If fuel charges apply, see alternate flow Fuel.

### 2.1.7 Distance Information

The system finds no charges for additional distance driven. If additional distance charges apply, see alternate flow Distance.

### 2.1.8 Product Information

The system finds no products and the use case continues at the next step. If products apply see alternate flow Products.

### 2.1.9 Discounts Information

The system finds no applicable discounts and the use case continues at the next step. If discounts apply see alternate flow Discounts.

### 2.1.10 Additional Fee Information

The system finds no additional fees and the use case continues at the next step. If additional fees apply see alternate flow Additional Fees.

### 2.1.11 Protection Information

The system finds no charges for protection and the use case continues at the next step. If charges for protection apply, see alternate flow Protection.

### 2.1.12 Miscellaneous Fees/Refunds Information

The system finds no applicable miscellaneous fees and/or refunds. If any fees and/or refunds apply, see alternate flow Miscellaneous Fees/Refunds.

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### 2.1.13 Special Rate Information

The system finds no special rates. If special rates apply see alternate flow Special Rates.

### 2.1.14 Tax Rules Processing

The Tax Rules System goes through each of the above charges and applies any applicable taxes and/or surcharges. The system determines which line items are taxable and which are not. Different taxes may apply to different items. The system also determines if an account is tax exempt. The Tax Rules System will specify the charge amount for Government Surcharge, Airport Access, and any other taxes. These charges within the Tax Rules System are specified either in per day, per rental, or percentage amounts.

### 2.1.15 The use case ends.

An amount reflecting the total charges is returned.

## 2.2 Alternative Workflows

### 2.2.1 Distance

The system determines total distance driven. The system subtracts the beginning distance from the ending distance to determine total distance driven. For each unit on the ticket, the system will determine the distance driven. Based on the distance driven and whether or not a renter was given limited or unlimited distance an additional distance charge may or may not be valid.

### 2.2.2 Fuel

The system determines fuel charges. The system will determine a total amount based on a per gallon charge, quarter tank charge, an empty tank charge, prepaid, etc. (see mathematical formulas Fuel for more information)

### 2.2.3 Products

The system determines the total amount that is due for any products. The system looks at the start charge and end dates for each product. For each product, the system will look at the number of days associated with it and multiply the rate times the number of days (note: i.e., if the billing cycle is 24-hour, and the renter has a vehicle for two extra hours and is charged \$15 an hour for the vehicle, that hourly charge does not extend to the product).

### 2.2.4 Discounts

The system applies any discounts. It must be determined what type of discount should be applied. The system looks at whether the discount is a flat fee or a percentage. The following are the possible discount types:

- A rate discount
- A rate and mileage discount
- A total charges discount

The system will look at whether or not the discounts applied are per day, per week, per month, or per rental. For each discount found, the system processes the total discount to be applied. It is a business requirement that the discount cannot exceed more than 50% of the total charges. See mathematical formulas Discount for more information

### 2.2.5 Additional Fees

The system determines the additional fees. The system looks at the start and end dates for each additional fee and determines the total amount to be charged per fee. This may be a daily, weekly, monthly, or per rental fee.

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## 2.2.6 Protection

The system determines the amount due for protection. The system looks at the start and end dates for each type of protection and determines the total amount. Based on the length of the rental, the system determines what the appropriate rate to charge is. For example, in New York, Personal Accident Insurance is staggered so the first day charge may be different than the charges for subsequent days .

## 2.2.7 Applicable Taxes and Surcharges

The system determines the amount for applicable taxes and surcharges. The system looks at the start and end dates for each type of applicable tax and/or surcharge and determines the total amount .

## 2.2.8 Miscellaneous Fees and Refunds

The system determines the amount for applicable miscellaneous fees and/or refunds. The system looks at each fee/refund and determines the total amount .

## 2.2.9 Special Rates

The system determines that a special rate applies and determines the total amount .

## 2.2.10 Start Charges if Different Date

The system determines the charges associated with a rental unit based on the start charges date. For example, a renter may rent a unit on a Monday but charges for that unit begin the following day and the system will determine this . Go back to main flow unit information (required).

## 2.2.11 24 Hour Billing Cycle

If a 24 hour billing cycle is in place, the system will look at the number of days and hours (if applicable) associated with each rate and determine the best rate possible by looking at the charge frequency . See Mathematical Formulas Determining Amount for examples.

## 2.2.12 Reservation

The system can calculate the total charges during the taking of a reservation. Unlike closing a ticket, the exact total may not be known (i.e. at the close of the ticket there may be charges for fuel, distance, etc.)

## 2.2.13 Open Ticket

The system can calculate total charges when opening a ticket. Unlike closing a ticket, the exact total may not be known (i.e. at the close of the ticket there may be charges for fuel, distance, etc.)

## 2.2.14 Callback

The system can calculate the total charges in a callback. Unlike closing a ticket, the exact total may not be known (i.e. at the close of the ticket there may be charges for fuel, distance, etc.)

## 2.2.15 Close-Pended

The system can calculate total charges if a ticket is close-pended. However, some information is most likely missing that may effect the total charges so the exact total is not known until the close of the ticket.

## 2.2.16 The Use Case Ends

An amount is returned which reflects the total charges for the ticket.

# 3. **Special Requirements**

## 3.1 <First Special Requirement>

# 4. **Pre-Conditions**

- A user must initiate an event triggering a process requiring the calculated charges to be displayed .

**Version 1.1**

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## Revision History

Date	Version	Description	Author
08/31/2001	1.0	First draft of Get Rates flow using Perot Engine(s)	Johnny S. Johnston
09/13/2001	1.1	Changes from business review	Johnny S. Johnston

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## Business Use-Case: Open Ticket Get Rates using Perot Engine(s)

### 1. Open Ticket Get Rates

#### 1.1 Brief Description

The purpose of this use case is to attempt to describe what information must be fed from the ECARS 2.0 system to the Perot Engine(s) in order to retrieve the appropriate rates for each product for the rental transaction. In this use case the products for which a rate is to be retrieved are the vehicle and all applicable coverages, where offered (CDW, PAI and SLP). The ECARS 2.0 system will provide the Perot system with specific information about the transaction in order to successfully retrieve rates. This use case is specifically addressing a walk in, open ticket, rental transaction.

### 2. Flow of Events

#### 2.1 Basic Flow

##### 2.1.1 Use Case Begins

This use case should be able to be invoked from anywhere in the Open Ticket process and initiate the request for rates, for appropriate products (in this case vehicle and coverages), from the Perot Engine(s) for a specific rental transaction. (Eventually, this use case will evolve into the one, which is used to get rates for all functions, Reservation, Open and Pre-Write)

##### 2.1.2 Information Needed For Rate Retrieval

The ECARS 2.0 system will need to provide specific information from the transaction to the Perot system to retrieve rates. Perot will require specific information before it will be able to search for products and their associated rates. Below is the list of items the Perot system will need to retrieve rates for an open ticket: (Note: Perot has six engines it uses to get rates for various products. The Rate engine for Vehicle, the Charge engine for estimating and allocating charges, the Equipment engine for ancillary items such as child seat and ski rack, the Coverage engine for insurance coverages, the Ancillary engine for add on fees such as youthful driver and additional driver and the General conditions engine for providing messages and standard conditions.)

- The pickup group and branch
- The pickup date
- The pickup time
- The return group and branch
- The return date
- The return time
- The booking channel (reservation origin)
- The rental status (ticket status – reservation, open, closed...)
- The rate source (account number, account name or default type)
- The rental type (insurance, body shop, dealership, etc.)
- The billing cycle

Note: There needs to be some way that the user has the ability specify a start charges date and time that is different than the pick-up date and time.



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Having values for all of the above items will allow the system to retrieve either a single rate plan or display all multiple rate plans to the user, so they can choose which one to use. Once a single rate plan has been selected, entering or selecting the following information will allow the system to show a rate by product.

- The specific unit (vehicle), either a direct entry or selection from a listing of available units.
- The option to display the car classes associated with the rate plan.
- The coverage(s) (as related to car class)

#### 2.1.3 Pickup Group and Branch

By the time this use case is invoked, the system should have already defaulted the pickup group and branch to the terminal location group and branch

#### 2.1.4 Pickup date and time

If the user has not entered a pickup date and time, then the system will default the date and time to current. The user can then have the ability to change it.

#### 2.1.5 Return Group and Branch

The system should default the return group and branch to the same as the pickup group and branch and allow the user to edit or change this.

#### 2.1.6 Return Date and Time

The user is required to entered a return date and time.

#### 2.1.7 Booking Channel – Reservation Origin

The reservation origin should be able to be distinguished by the system and have the appropriate value assigned by the system.

#### 2.1.8 Rental Status

For this use case the status will be "Open". The system should be able to determine the status and assign the appropriate value for all instances of a rental transaction.

#### 2.1.9 Rate Source

The user has either selected an account name or account number to locate and assign a rate source, or has selected to use the default rates.

#### 2.1.10 Rental Type

The user is required to select a rental type.

#### 2.1.11 Billing Cycle

The user is required to select a billing cycle.

With the above information entered into the system, selected by the user, or determined by the system, the Perot engine should be able to return any and all associated rate plans with a particular account.

If there are multiple rate plans (agreements), the system should display this information to the user, and provide a way to select the appropriate one. Use case continues below.

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If there is a single rate plan (agreement), the area is populated with that plan textual description.

#### 2.1.12 Unit (Vehicle) Selection

The system will allow the user to either enter a specific unit number or to have the ability to select one from a list of available units.

#### 2.1.13 Display all Car Classes for Rate Plan option.

The system will have a feature available which will allow the user to display all of the car classes associated with the specific rate plan selected and the corresponding rates for each car class.

Once the user has selected a single car class the system will display the units available for that car class. When the user selects a vehicle (Unit), this use case continues below.

#### 2.1.14 Get Rates

Once a specific unit has been identified or selected by the user, there should be some mechanism to allow the user to specify to the system to get the rates.

#### 2.1.15 System Returns Rates

With all of the previously entered or system derived information, the system determines by the specific unit, the rate and car class and returns the rate for the vehicle and the appropriate rate for all applicable coverages CDW, PAI and SLP.

The rate information is presented to the user by product for daily, weekly, monthly and hourly time periods. If a rate is not available for a time period, the system returns a value of zero.

This information is displayed to the user in a manner that allows editing or changing of the rates. Any changes in the rates will only apply to this specific rental transaction, and will not be reflected back in the rate plan.

If the system cannot find a car class, based on the unit, for that rate plan, the use case continues at Car Class Not Present In Account Rate Plan.

#### 2.1.16 User Accepts Rates Returned.

The system returns the rates for the time periods indicated for the vehicle, selected or indicated, and all available coverages, CDW, PAI and SLP. The user accepts the rate without changes, informs the renter of the rates by product, and saves the transaction.

The user also has an option to have the system to calculate total charges, for the selected products, over the duration of the rental. This will invoke the estimated charges use case.

The use case ends.

#### 2.1.17 Car Class Not Present In Account Rate Plan

If the car class is not present in the account rate plan, the system notifies the user of this and gives the user the option of using default rates, selecting a different car class within the specific rate plan, selecting another rate source or manually entering in the rates for the vehicle and/or coverages.

If another rate source is selected, default or another account, the use case resumes at 2.1.9.

If another car class is selected within the specific rate plan, the use case resumes at 2.1.13.

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If the user manually elects to manually enter the rates, there should be some function to allow this process. The rates will be saved with the rental transaction.

This use case ends.

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### 3. Special Requirements

3.1 If any component of the information needed for rate retrieval is changed which causes a change in the rates for any item, a message is displayed to the user informing them of such.

### 3.2 GDS Response Time

Our contracts with GDS systems require that a response be returned to a rate request within seven seconds.

### 4. Pre-Conditions

#### 4.1 User must be logged on

- The user is logged into ECARS 2.0 2.0 application and ECARS 2.0 has validated the user has privileges to perform rate verification.
- The user has access to the local machine.
- The user has access to the network.

### 5. Post-Conditions

5.1 < Post-condition One >

### 6. Extension Points

6.1 <Name of Extension Point>

7. Questions – all answered in initial business review.

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# Enterprise Rent-A-Car

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## Rental Redesign/ECARS 2.0 Business Use-Case Specification: Rate Verification

Version 1.6

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## Revision History

Date	Version	Description	Author
04/02/2001	1.0	1 <sup>st</sup> Draft	Allison Bruhn
04/06/2001	1.1	1 <sup>st</sup> Revision-changes to the basic workflow; expanded on alternate workflows, formatted document	Allison Bruhn
05/09/2001	1.2	2 <sup>nd</sup> Revision-added pre-conditions; changed wording on main flows; added billing cycle as a bullet under user enters information	Allison Bruhn
05/15/2001	1.3	3 <sup>rd</sup> Revision-added two sections for Input and Output fields; added new section stating system presents user with blanked out fields upon entry where the user can enter information; stated which fields are mandatory and which are not	Allison Bruhn
05/16/2001	1.4	4 <sup>th</sup> Revision-combined 2.1.5 and 2.1.6; in alternate flows took out extra wording and instead put "Use the information from the Retrieve Rates Use Case	Allison Bruhn
05/17/2001	1.5	Removed any statements related to call the Estimate Charges Total Use Case; took out unneeded alternative flows;	Allison Bruhn
06/01/2001	1.6	Added criteria into the input fields: mileage, fuel, products, airport fees (returned as yes and then the user has the option to remove or zero out), put into req pro	Allison Bruhn
08/31/2001	1.7	Unmarked requirements having to do with input fields, output fields.	Allison Bruhn

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## **Business Use-Case Specification: Rate Verification**

### **1. Rate Verification**

#### **1.1 Brief Description**

The purpose of this use case is to give the user (an employee that will perform data entry) the ability to verify that rate information was correctly entered into the system. The system invokes the retrieve rates use case allowing the user to verify the rates were correctly entered.

### **2. Flow of Events**

#### **2.1 Basic Workflow**

##### **2.1.1 *Use case begins***

This use case begins when the system presents an authorized user (most likely an administrative employee) input fields to enter specific criteria . (Note: the user entering the rates may or may not be the same individual verifying them when they are returned).

##### **2.1.2 *Fields Displayed for Rate Verification***

Upon entry, the user will see fields displayed. The required fields are pickup group branch, pickup date, and pickup time. If these fields are left blank no validation will occur.

- Pickup group branch (required)
- Pickup date (required)
- Pickup time (required)
- Return date (this will default to the next day if the user does not enter anything)
- Return time (this will default to the next day if the user does not enter anything)
- Billing cycle
- Booking channel (required)
- Car class and
- Rate Source (this may be an account number or a standard type)
- Products/Coverages
- Fuel Charges
- Excess Distance Driven
- Airport Fees

##### **2.1.3 *Initiating Call***

The user enters criteria and the rental system initiates the call to the retrieve rates use case.

##### **2.1.4 *System Validates Entered Criteria***

The system validates there is enough criteria entered to continue and the retrieve rates use case is invoked. If not enough criteria was entered see alternate flow Invalid Criteria.

##### **2.1.5 *Retrieve Rates Use Case***

The retrieve rates use case is made available and if a valid rate structure is present the use case continues at the next step. If the rate retrieval was unsuccessful, see alternate flow Unsuccessful Rate Retrieval.



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### 2.1.6 Display Output Fields

The rates system displays output fields containing information based on the input entered by the user.

- Agreement number
- Agreement name
- Contractual condition ID
- Contractual condition Name
- Product name
- Product ID
- Rate header name
- Rate detail

Note: If there are multiple billing types the user can select one and another call to the rates system is performed.

### 2.1.7 Verify Correct Rates Returned

The rates system returns rates based on the information provided by the rental system. The user goes through a manual process of looking at the rates returned and verifies the rates are valid. If they are valid, the user can continue on at the main flow Initiating Call. If the system does not return the expected rates see alternate flow Incorrect Rates.

2.1.8 The use case ends.

## 2.2 Alternative Workflow

### 2.2.1 Invalid Criteria

When the system is validating the entered information, it will not return any rates if not enough information is entered. The user can return to main flow and re-enter criteria to once again search for rates or the use case ends.

### 2.2.2 Unsuccessful Rate Retrieval

UC5.2.2.2 Based on the criteria entered, the system returns no rates. The user can return to the main flow and re-enter criteria to once again search for rates or the use case ends.

### 2.2.3 Incorrect Rates

The system returns incorrect rates. The user can select which rate is incorrect and immediately go into audit mode and view the incorrect rate (TBD).

2.2.4 The use case ends.

## 3 Special Requirements

## 4 Pre-Conditions

- The user is logged into ECARS 2.0 application and ECARS has validated the user has privileges to perform rate verification.
- The user has access to the local machine.
- The user has access to the network.

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## 5 Post Conditions

2.3 5.1 <Post-condition One>

## 6 Extension Points

2.4 6.1 <name of extension point>

## 7 Questions

2.5 7.1 Security Access

Can the user entering and verifying rates change the group or region for rate verification? What type of access should they have?

2.6 7.2 Change Incorrect Rates

When a user is viewing the incorrect rate should they have access there to go into another mode to change it right away or be able to put some sort of comment in regarding which rate was incorrect, etc?

## Rental Redesign/ECARS 2.0

### Business Use-Case Specification: Rates Window

[illegible]

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## Revision History

Date	Version	Description	Author
08/13/2001	1.0	1 <sup>st</sup> Draft-Initial creation	Allison Bruhn
08/15/2001	1.1	1 <sup>st</sup> Revision-changed flows based on business changes for the dates/rates screen; removed car class from the main flow and put as part of Rate Source since now the user can enter or select a car class from the rate source section and directly enter rate information without a rate source	Allison Bruhn
08/21/2001	1.2	2 <sup>nd</sup> Revision-added flows and alternates. Added UK flow; added bullet points describing the input fields that are displayed	Allison Bruhn
08/22/2001	1.3	3 <sup>rd</sup> Revision-took out alternate flow Incorrect Rate Returned; took out all info related to the user verifying anything since this will occur in the rates validation use case; moved the Calculate Total Charges Alternate Flow to the Main Flow	Allison Bruhn
08/27/2001	1.4	4 <sup>th</sup> Revision-made minor changes after meeting with the business. Took out one of the bullets in Criteria entered (billing type); added the face that the user will see the appropriate taxes/surcharges that are brought back	Allison Bruhn

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# Business Use-Case Specification: Rates Window

## 1. Rates Window

### 1.1 Brief Description

This use case will describe how a user interacts with the system to receive a rate or rates (within reservation, open, and close of a ticket) based on specific criteria entered. Examples of information that may be entered consists of group and branch, pick-up dates and times, car class, billing cycle, etc. It is envisioned that this process will take place through some sort of a rates window where input fields exist for the user to enter the different criteria and in return rates will be returned via some sort of window containing output fields. The user should then have the ability to calculate total charges once the rate or rates are received as well as add/remove criteria and recalculate the total. The user will also be able to receive the taxes and surcharges that are applicable to certain items.

## 2. Flow of Events

### 2.1 Basic Workflow

#### 2.1.1 Use Case Begins

The use case begins when a user chooses to work with the rates window function.

#### 2.1.2 Display Rates Window

The system displays all input criteria fields within the rates window where the user can enter information (please refer to the Supplementary Action Specification for exact detail) . The following fields are displayed upon entry to the rates window:

- Status of the ticket (reservation, open, or close)
- Pickup Group (mandatory-defaults to the current group)
- Pickup Branch (mandatory-the user can select which branch they wish to work with)
- Return Group
- Return Branch
- Pickup Date (mandatory)
- Return Date
- Pickup Time
- Return Time
- Rate Source (mandatory-default to retail)
- Account Number
- Billing Cycle (optional on res, mandatory on open and close ticket)
- Car Class
- Fuel
- Distance
- Specific Unit Number (mandatory open and close of ticket)
- Booking Channel (default to branch-mandatory)

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- Rate Type (Insurance, Body Shop, Dealership, Corporate, Government, Fleet, Retail)
- Rental Type

### 2.1.3 Criteria Entered

The user enters group branch, pickup and return dates and times, car class, rate source or any other combination of the criteria . If the group branch is a VLF Group see alternate flow VLF Ranges.

### 2.1.4 Information Sent

The system sends information to the rate retrieval system. The system confirms the information is valid. If the information entered is not valid, see alternate flow Invalid Information Entered.

### 2.1.5 Rate Sent Back

Based on the information entered a rate or rates are returned . If the system finds no rate based on the criteria entered see alternate flow No Rates Found. If the system returns multiple rates, see alternate flow Multiple Rates Returned.

### 2.1.6 Calculate Total Charges

Once the user has received a rate(s) back from the system after inputting certain input fields, they have the option to calculate the total charges. The user will be able to see any applicable taxes associated with the transaction .

### 2.1.7 The Use Case Ends

## 2.2 Alternative Workflows

### 2.2.1 Invalid Information Entered

The user has incorrectly entered one or more of the criteria (i.e. invalid pickup date, return date, etc.). Some type of error message should be presented to the user indicating the information entered is invalid . The user can choose to re-enter the information and the use case continues at the main flow Criteria Entered. If they choose not to re-enter, the use case ends. The user can also choose to cancel and any time.

### 2.2.2 No Rates Found

The system finds no rates based on the criteria entered by the user. The user can choose to re-enter the criteria and the use case continues at the main flow Criteria Entered or the user can choose to cancel and the use case ends.

### 2.2.3 Multiple Rates Returned

Based on the criteria entered, the system returns more than one rate. The user can choose to select one rate or choose to enter more criteria to narrow the list of rates down and the use case continues at the main flow Criteria Entered.

### 2.2.4 Invalid Account Entered

The account number entered is not valid. Some message should be produced to the user alerting them of this ("invalid account number"). The system should check the validity of the account number prior to the information being sent to the engine . The user can return to the main flow and re-enter criteria once again to search for rates or the use case ends.

#### 2.2.4.1 Valid Account Entered Containing No Rates

The account number entered by the user is valid, however, no rate structure is set up for that account. Based on the rate type associated with the account number, default rates are returned .

### 2.2.5 VLF Ranges

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If the user chooses to receive VLF ranges for a reservation a car class must be entered. For the open and close of a ticket, the specific unit must be on the ticket to receive the specific VLF rate. The VLF rate is returned when the user chooses to calculate total charges as this engine calls the taxes engine in which VLF is stored.

#### 2.2.6 Special Equipment

The user chooses to add or remove one or more items that fall under special equipment (see Definitions section at the end). If the user initiates this process the coverages engine will be called. The use case continues at the main flow Information Sent.

#### 2.2.7 Coverages

The user chooses to add or remove a coverage. If the user initiates this process the coverages engine will be called. The use case continues at the main flow Information Sent.

#### 2.2.8 Ancillary Charges

The user chooses to add or remove one or more ancillary items. If the user initiates this process the coverages engines will be called. The user case continues at the main flow Information Sent.

#### 2.2.9 The Use Case Ends

### 3. Special Requirements

### 4. Pre-Conditions

The user has access to the local machine

The user is logged into the ECARS 2.0 application and the user has been granted access to the rates window

### 5. Post Conditions

#### 5.1 < Post-condition One>

### 6. Extension Points

#### 6.1 <name of extension point>

### 7. Definitions

- Coverage (CDW, PAI, PEC & SLP)
- Ancillary Charges (Additional Driver & Young Renter)
- Special Equipment(Child Seats, Tire Chains, Bike Rack, etc...)

### 8. European Requirements



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# Enterprise Rent-A-Car

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## Use Case Specification: Retrieve Rates

Version 1.6

Enterprise Rent-A-Car  
Use Case Specification  
Retrieve Rates  
Version 1.6

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## Revision History

Date	Version	Description	Author
03/16/2001	1.0	First draft of the main flow and some information for alternates	Maribeth Concannon
03/26/2001	1.1	Main flow changed and minor enhancements of alternates and additional alternates added	Maribeth Concannon
04/02/2001	1.2	Changes to description, alternate flows	Allison Bruhn
04/23/2001	1.3	Changes to main flow	Allison Bruhn
05/09/2001	1.4	Removed some of the flows not needed (rate source section, re-rating, no chargeable items selected; reworded sections regarding re-rating and check availability-combined;	Allison Bruhn
05/15/2001	1.5	Left in flows that the pricing engine is going to do but put note in stating that. Put links to the FAQ's; left in flows relating to Perot's pricing engine (one's that we are not sure will be handled by Perot or not yet); added section Additional Information with rate hierarchy tables	Allison Bruhn
05/22/2001	1.6	Changes based on user review; took out alternate flow UM location; in addition to the fields marked required in Information Needed for Rate Retrieval, also marked booking channel as required and the made a note that return date and time are defaulted to the next day; changed wording in flows No Car Class Returned (to no rates for car class returned), No Account Rates Are Found, Car Class Not Present in Account Rate Plan, and Car Class Not Present in Standard Rate Plan to return emptied out fields rather than 0.00; took out 2.2.11 Multiple Billing Types in Agreement; added into req pro	Allison Bruhn

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## **Business Use-Case Specification: Retrieve Rates**

### **1. Retrieve Rates**

#### **1.1 Brief Description**

The purpose of this use case is to show what the system does to retrieve the appropriate rates requested for a rental transaction. The rental system will provide the rates system with specific information from the transaction in order to successfully retrieve rates.

### **2. Flow of Events**

#### **2.1 Basic Flow**

##### **2.1.1 Use Case Begins**

This use case begins when the rental system initiates a request for rates for a specific rental transaction.

##### **2.1.2 Information Needed For Rate Retrieval**

The rental system provides the rates system with information from the transaction to retrieve rates. Any other criteria entered from below may affect what rate is retrieved. (See Rate Hierarchy for additional information.)

- The pickup group branch (required)
- The pickup date (required)
- The pickup time (required)
- The return date (default will be set to one day after the pickup date)
- The return time (default will be set to one day after the pickup time)
- The car class which the rental system wants priced
- List of all of the optional products and charge items selected by the user in the transaction
- Rate source (this is either an account number or a standard type)
- Booking channel/location (required-see Identify Booking Channel in Pre-Conditions)
- 

**Note: From 2.1.3 through 2.1.9, the rental system passes information to the rates system which becomes the responsibility of the pricing engine. However, they are left in this use case for now as reference.**

##### **2.1.3 Validate Dates and Branch**

Next, the system validates the information by confirming that the return date is the same or after the pickup date. It also confirms that the pickup branch is a rental branch.

##### **2.1.4 Rate Source**

Next, the system uses the rate source to search for a contractual agreement or a standard agreement. An agreement is found and the user case continues at the next step. If no agreement is found see alternate flow No Agreement Found. The system searches for this rate agreement in effect for the pickup branch and the pickup date. If no agreement is found, the system uses the branch information to find the next level of the rate hierarchy (see Additional Information Rate Hierarchy) and searches again for a rate agreement in effect for the pickup branch for the pickup date. The system continues this process through the hierarchy until an agreement is found, or the hierarchy levels are exhausted. If no account rates are found see alternate flow No Account Rates Found.

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### 2.1.5 Agreement Found

Once an agreement is found for the branch and pickup date, the system checks for the number of billing types included.

If there is only one billing type, the rates system retrieves the billing cycle associated with the billing type . If there are multiple billing types see alternate flow Multiple Billing Types.

### 2.1.6 Calendar Day

If the billing cycle is calendar day, the rates system proceeds to retrieve the vehicle daily rate for the car class provided . If the billing cycle is 24 hour see alternate flow 24 Hour Billing Cycle.

### 2.1.7 Charge Items

After the daily rate for the vehicle is retrieved, the rate for each additional charge item specified is retrieved, along with its charge frequency. When hourly, weekly, or monthly are available, these are not selected because only daily is required on a calendar day transaction, however values like "per rental" are valid . (see FAQ: Charge Frequency). If re-rating one or more charge items applies see alternate flow Re-Rating.

### 2.1.8 Text Messages

The system retrieves all messages associated with the rate source or the agreement . See FAQ Text and Rules

### 2.1.9 Rules

The system retrieves all rules associated with the rate source and with the agreement . See FAQ Text and Rules

**The responsibility of the pricing engine ends and information is returned to the rental system.**

### 2.1.10 Returned Rates

The rates for all charge items are returned along with all messages and rules associated with the rate source or the agreement . If no account rates are found see alternate flow No Account Rates Are Found. If no rates for car class are returned see alternate flow No Car Class Returned. If no agreement is found see alternate flow No Agreement Found.

### 2.1.11 The use case ends

The requested information is returned including any and all rates, messages, and rules based on the criteria the rates system used to retrieve rates .

## 2.2 Alternative Flows

### 2.2.1 No Rates for Car Class Returned

If no rates for car class are returned (a null value rather than 0.00), allow the user to re-enter one or more of the criteria needed for the system to retrieve a rate . If multiple rates are returned the user can choose to select one.

### 2.2.2 Check availability

This is only done during the make a reservation process. For example, if a renter has made a reservation to pick up a certain car class on Monday and plans to return it the following Monday but changes the pick-up date to a day later for the same car class, the system would not check availability. However, if the reservation pick up date was changed to two days prior to the original pick up date, the system would check for availability. Or, if the renter kept the same pick up date but changed the car class the system would check for availability (see FAQ-Availability Check).

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### 2.2.3 Re-Rating

#### 2.2.3.1 One or More Charge Items

The user may request to have one or more charge item(s) re-rated due to changes in the transaction or the addition of a charge item after the reservation has been made or the ticket has been opened. In the case of the vehicle, the availability should not be checked once the reservation has been made, provided that no changes in the date of pickup have been made.

#### 2.2.4 No Agreement Found

If the system cannot find an agreement, the user can re-enter one or more of the criteria needed for the system to find an agreement or the use case ends.

#### 2.2.5 No Account Rates Are Found

If no account rates are found, return 0.00 and allow the user to select another rate source. (See FAQ No Rates Returned for NatRes)

#### 2.2.6 Multiple Billing Types

The system returns multiple billing types. Based on which billing type is selected the system will then retrieve the billing cycle associated with the billing type. The use case continues at the main flow calendar day.

#### 2.2.7 Tiered Rates

If the applicable rates are tiered, then the system will return rates in this fashion.

#### 2.2.8 Staggered Rates

If the applicable rates are staggered, then the system will return rates in this fashion.

#### 2.2.9 24 Hour Billing Cycle

If the billing cycle is 24 hour, the system uses the billing type and the pickup and return days to return an hourly, daily, weekly, and monthly rate.

#### 2.2.10 Using Account Type To Retrieve Rates From Standard Type

If the account type has a matching standard type, use it. Otherwise use the standard type mapped to the account type.

##### 2.2.10.1 Car Class Not Present In Account Rate Plan

If the car class is not present in the account rate plan, the system searches the account's profile for information about whether or not to automatically look in the standard plans for the rate or to stop the rate search and return a null value. (Perot's pricing engine most likely going to handle this)

##### 2.2.10.2 Car Class Not Present In Standard Type Rate Plan

If the car class is not present in the standard type rate plan, return a null value (rather than 0.00). (Perot's pricing engine most likely going to handle this)

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### 3. Special Requirements

#### 3.1 GDS Response Time

Our contracts with GDS systems require that a response be returned to a rate request within seven seconds .

### 4. Pre-Conditions

#### 4.1 User must be logged on

- The user is logged into ECARS 2.0 application and ECARS has validated the user has privileges to perform rate verification.
- The user has access to the local machine.
- The user has access to the network .

#### 4.2 Identify booking channel

System must have identified which distribution channel is being used to retrieve the rates, and for what purpose (make reservation, update reservation, open ticket, open ticket using a reservation)

### 5. Post-Conditions

#### 5.1 < Post-condition One >

### 6. Extension Points

#### 6.1 <Name of Extension Point>

### 7. Questions

## Use Case Specification: Request Special Rates

Version <1.0>



**Project:**  
ECARS 2.0

**Phase:**  
Inception

**Iteration:**  
N/A

## Revision History

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Page 2 of 5

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## Request Special Rates

### 1. Request Special Rates

#### 1.1 Brief Description

This document provides the scenarios used to obtain and select Special Rates. This use case is an extension to the Retrieve Rates UC for the step where the User enters the Rate Source. In this case the user has requested to obtain "Special" Rates, which can be defined as: Rates, which are available for a limited period of time, example: Weekend Special. Actual implementation details are contained in the Consolidated Products and Rates – IT 3.SUP documents.

### 2. Flow of Events

#### 2.1 Basic Flow

- 2.1.1 *User requests the "Special Rate".*
- 2.1.2 *Pricing Engine Determines that the Special Rate is applicable.*
- 2.1.3 *Rates displayed to the User.*

#### 2.2 Alternative Flows

- 2.2.1 *Res Location not Pickup Branch, PU is Prior to Qualification*
  - 2.2.1.1 User Request Special Rate
  - 2.2.1.2 Pricing Engine finds no Special Rates for the Criteria Entered.
  - 2.2.1.3 System Displays "No Rates Found Message"
  - 2.2.1.4 User Clears Message
  - 2.2.1.5 User Selects Rate Source other than "Special".
- 2.2.2 *Res Location is Pickup Branch, Pickup DT prior to Qualification*
  - 2.2.2.1 User Request the "Special Rate"
  - 2.2.3 *Pricing Engine finds Special Rates, but all the Qualifications on PU are not met.*
    - 2.2.3.1 System Display Message to the User: "The entered P/U D/T is outside the Qualifications for the Special Rate. Do you wish to extend the qualification and use the Special Rate anyway?"
    - 2.2.3.2 User elects to Extend the Special Rate.
      - 2.2.3.2.1 User elects not to extend Special Rates.
      - 2.2.3.2.2 System Clears Message and Returns to Rates test Window.

2.2.4 *User elects to Re-Allocate days at the Special Rate and Days at the Standard Retail Rate. >*

### **3. Special Requirements**

#### **3.1 Location Based Flexibility (Information Purposes Only)**

- 3.1.1 *If the Reservation Source is different than the Pickup Branch all Pickup qualifications must be met.*
- 3.1.2 *If the Reservation Source is the Pickup Branch, then the user will have the option to extend the special rate when the Pickup is prior to the stated Pickup Qualification.*
- 3.1.3 *If the Rental is extended beyond the Special Period, standard Retail Rates will be used for the additional days.*

#### **4. Pre-Conditions**

User has filled in the necessary criteria to obtain rates

#### **5. Post-Conditions**

#### **6. Extension Points**

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**Enterprise Rent-A-Car**

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**Rental Redesign  
ECARS 2.0 Architecture**

**Version 1.0**

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## Revision History

Date	Version	Description	Author
11/9/2001	1.0	Document Created	Casey Levin

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# ECARS 2.0 Architecture

## 1. Introduction

The ECARS 2.0 application is an operational system designed to support Enterprise Rent-a-Car's Rental line of business. The application will ultimately replace the existing AS/400 based ECARS 1.0 application. However, due to external dependencies, integration to the existing system is an integral part of the new ECARS application.

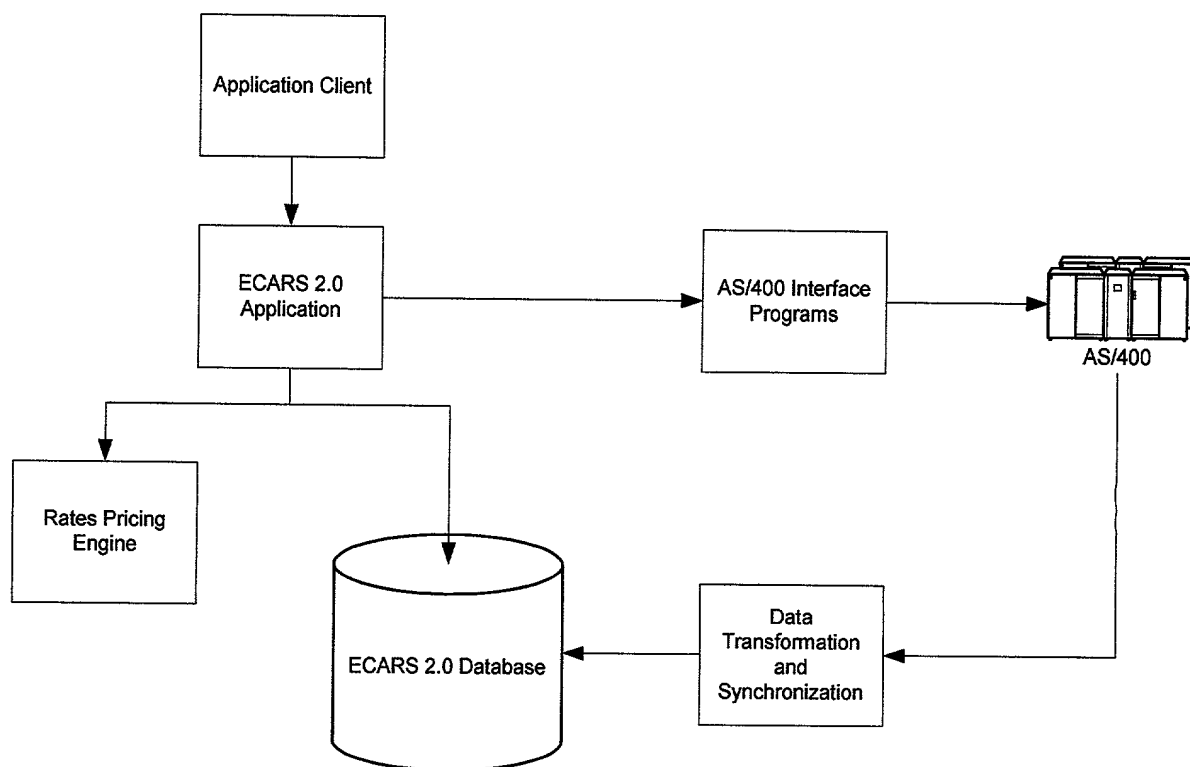
The following document is intended to describe the overall architecture of the ECARS 2.0 system at a conceptual and logical level. For physical implementation specifics reference the documents specified in Appendix A.

## 2. Conceptual Architecture

At it's highest level, the ECARS 2.0 system is composed of seven main components; the Application Client, Web Application; AS/400 Interface Programs, AS/400, ECARS 1.0 to ECARS 2.0 Synchronization, ECARS 2.0 Database, and the Rates Pricing Engine.

The Application Client represents any client to the application. This includes the web based user interface, or external application interfaces. The Web Application encompasses the ECARS 2.0 business logic as well as the logic to render the pages for the user interface. The AS/400 interface programs are used to leverage functionality from the existing AS/400s or to synchronize data with them. The AS/400s process several applications including the current ECARS 1.0. The ECARS 1.0 to ECARS 2.0 Synchronization is used to synchronize data from the AS/400 to the ECARS 2.0 application. The ECARS 2.0 Database serves as the main data storage for the ECARS 2.0 application. Finally, the Rates Pricing Engine is the component used to generate all Rate related information for ECARS 2.0 and future external applications. Each of these components will be discussed in more detail in the subsequent sections.

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**Figure 1 - ECARS 2.0 Conceptual Architecture**

### 3. Logical Architecture

#### 3.1 Application Client

##### 3.1.1 Thin Client

The ECARS 2.0 application has been designed to utilize a thin client for the user interface. The generated HTML pages are generally lightweight with no applets and minimal JavaScript. These pages are displayed in an Internet Explorer browser running on a terminal server at the branch. This allows for minimized deployment complexities while leveraging currently available technologies.

While most features utilize traditional Web technologies, the ECARS system has a requirement to know the physical location of a request. This requirement is not inherently supported using Web technologies. Therefore, the ECARS application leverages a script running on the Terminal Server to access the Active Directory and create a cookie with the user's physical location. This cookie is retrieved by the ECARS application to determine the physical location of the request.

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### 3.1.2 External Clients

The Enterprise Rent-a-Car environment consists of several applications whose combined responsibility is to support the day-to-day operations of the company. The ECARS 2.0 application has been designed to leverage some of these existing assets as well as provide functionality to others. These external clients support differing levels of communication and integration. Therefore, to support the wide range of application interfaces, the ECARS 2.0 application has been designed to support four main methods of integration: JMS Messaging, RMI, Web Services, and the WebLogic/Tuxedo Connector.

Currently, JMS messaging is being considered for asynchronous calls from external clients. The JMS message would be consumed by a Message Driven Bean within the ECARS 2.0 Web Application and processed accordingly.

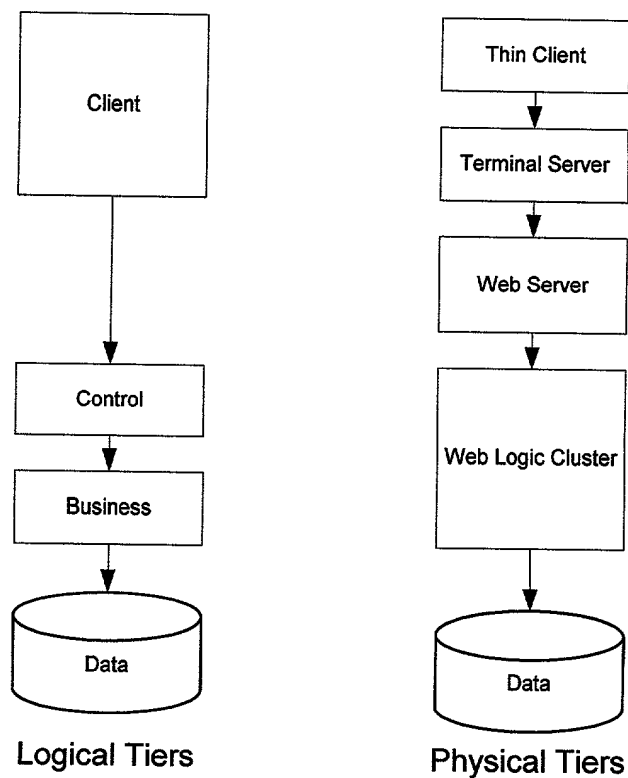
Alternatively, for synchronous calls, the ECARS 2.0 Application can support RMI and Web Service calls. However, the Web Service approach is currently favored over direct RMI calls. This is due to the looser coupling between applications using the Web Service approach.

Finally, the WebLogic/Tuxedo Connector will be utilized to provide an interface for Tuxedo based applications to leverage ECARS 2.0 functionality. This allows WebLogic to appear as a Tuxedo domain and thus allows a Java process to appear as a Tuxedo service. Therefore, external Tuxedo services will be able to call a Java process using the same method as it would to call a different Tuxedo service.

## 3.2 ECARS 2.0 Web Application

The ECARS 2.0 Web Application has been designed to leverage Java, J2EE and browser based technologies. Its implementation relies heavily on industry standards, design patterns, and best practices. When looking at the application functionality, it can be segregated into four Logical tiers that are deployed onto several physical tiers.

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**Figure 2 - ECARS 2.0 Web Application Tiers**

The Client tier represents a thin client user interface. This interface contains very little business logic and consists solely of HTML pages with JavaScript. These pages are rendered within an Internet Explorer browser and are generated from Java Server Pages.

The Control tier is responsible for generating the HTML/JavaScript pages, managing navigation, transforming data, and performing field level validations (e.g. did the user enter a numeric value in a numeric field).

The Business tier consists of the logic for the application business rules, validations, and data interactions. These are implemented using EJBs and Java Classes.

The Data tier represents the data storage for the application



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### 3.2.1 Web Application Components

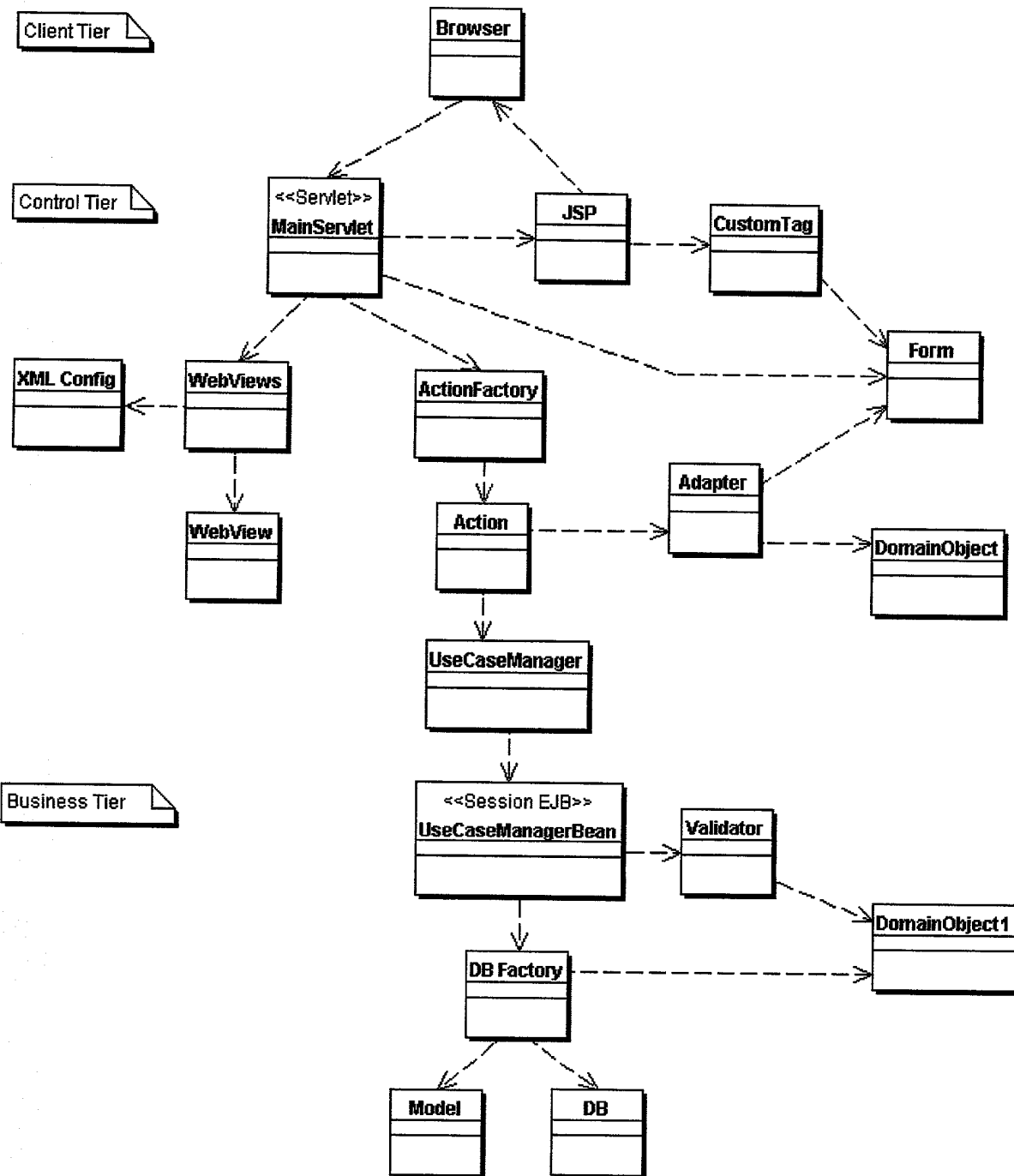


Figure 3 - ECARS 2.0 Web Application Components

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#### 3.2.1.1 Action

The Action encapsulates any processing logic that was requested or required prior to displaying a page or when leaving a page. For example, if a request is made to save a reservation, an Action will delegate to other objects and ensure the data is aggregated correctly. If so, the Action will initiate a call to a Use Case Manager to ultimately save the data.

#### 3.2.1.2 Action Factory

The Action Factory is responsible for creating instances of Actions and pooling them for reuse.

#### 3.2.1.3 Adapter

The Adapter is a data mapping mechanism to transfer data between the Form and the Domain Object.

#### 3.2.1.4 Browser

HTML and JavaScript based user interface.

#### 3.2.1.5 Custom Tag

Custom Tags are Java objects used to encapsulate presentation logic required to present dynamic content from the JSP. Example tags include a tag to create an HTML table of drivers, a color indicator based on reservation status, etc.

#### 3.2.1.6 DB

The DB contains all of the SQL for transactions with the database.

#### 3.2.1.7 DB Factory

The DB Factory transforms data between Domain Objects and Model Objects. One Domain DB Factory may call another one to support more complex transactions. For example, to save a reservation, a Reservation Domain (with associated Driver Domain, Bill To Domain, etc.) will be passed to a Reservation DB Factory. The Reservation DB Factory will then delegate to other factories as required to process other Domains such as Driver and Bill To. The DB Factory may also serve as a data cache if required.

#### 3.2.1.8 Domain Object

The Domain Object is a data holder for information passed through the system. These are typically business objects such as a Reservation or a Driver.

#### 3.2.1.9 Form

The Form is a data holder for information required during a user session. Typically, these objects are more course-grained than a Domain Object and represent aggregated data required for the display of a page.

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### 3.2.1.10 JSP

The JSP is responsible for creating an HTML page based on dynamic data. It does so by executing on the application server with a combination of HTML, JavaScript, and calls to Custom Tags.

### 3.2.1.11 Main Servlet

The Main Servlet is responsible for receiving all requests made from the browser. The Main Servlet takes data from the request and places it into a Form for processing. While doing so, the Main Servlet will utilize helper classes to perform field level validations such as a valid date entered in a date field. The actual application processing is delegated from the Main Servlet to an Action.

### 3.2.1.12 Model

The Model is an object representation of a result set from a data source. These objects are used to provide an additional layer of isolation between the data structure and the Domain Objects within the application.

### 3.2.1.13 Session

The Session (not pictured above) is used to temporarily store data specific to a user's interaction with the system. Typically, Forms or Domain Objects will be stored with the Session to enable application processing. These objects are typically removed when a user leaves a page and the data is no longer required.

### 3.2.1.14 Use Case Manager

Encapsulates a call from the Action to the Application Layer.

### 3.2.1.15 Use Case Manager Bean

The Use Case Manager Bean is responsible for implementing business logic in the Application Layer. The Use Case Manager Bean is responsible for managing the complete transaction with the database.

### 3.2.1.16 Validator

Validator objects are responsible for validating a Domain Object. Validators are specific to a Domain Object and can be "chained" together to enable stricter validation rules.

### 3.2.1.17 Web View

The Web View is an object representation of an entry in the XML file.



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### 3.2.1.18 Web Views

Web Views is the object responsible for parsing the XML configuration file and creating the appropriate Web View objects. This object also maintains a pool of Web View objects; therefore the XML file does not need to be re-parsed for each request.

### 3.2.1.19 XML Configuration File

This file contains properties for all page requests. Information specified in the file for each page includes: possible navigation destinations, page field elements, the Enter Action, and the Exit Action.

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### 3.2.2 User Request Processing

The following sections describe the lifecycle of a typical user request on the ECARS 2.0 Web Application.

#### 3.2.2.1 Control Processing

As illustrated in Figure 4 below, the MainServlet serves as the main entry point into the ECARS 2.0 Web Application. When the MainServlet receives a user request, it first retrieves an instance of the WebViews object. It then retrieves the WebView object corresponding to the user request. If this is the first request into the application, the WebViews object will parse the application's XML configuration file to generate a pool of WebView objects.

Once the MainServlet has retrieved the WebView object, it will get a list of Form Fields from the WebView. These Form Fields represent fields on the web page and map directly to attributes in the web page's corresponding Form Object. The MainServlet uses the list of Form Fields to get data out of the HttpServletRequest and set it in the appropriate Form. While doing so, the MainServlet may use Form Field Validators to validate that the data is the correct type (e.g. numeric data for a numeric field).

After the data is processed from the request and placed into a Form object, the MainServlet retrieves the Action that corresponds to the page that the user is exiting. The MainServlet then delegates to the Action for any application processing that may be required when the user leaves the page. For example, if a user chooses to save some data, this logic would mostly likely be encapsulated into the exit processing for the save page (details of the page exit processing is described in Section 3.2.2.2).

If the page exit processing was not successful, the MainServlet will process the error using the application's exception handling components. Otherwise, the MainServlet will retrieve the Action corresponding to the page that the user would like to navigate to. Similar to the page exit processing, The MainServlet will delegate to the Action for all processing that is required prior to displaying the page. For example, the retrieval of data for display to a user could be encapsulated into the page enter processing (details of the page exit processing is described in Section 3.2.2.3). Then, to display the page, the MainServlet forwards or redirects the request to the corresponding JSP.

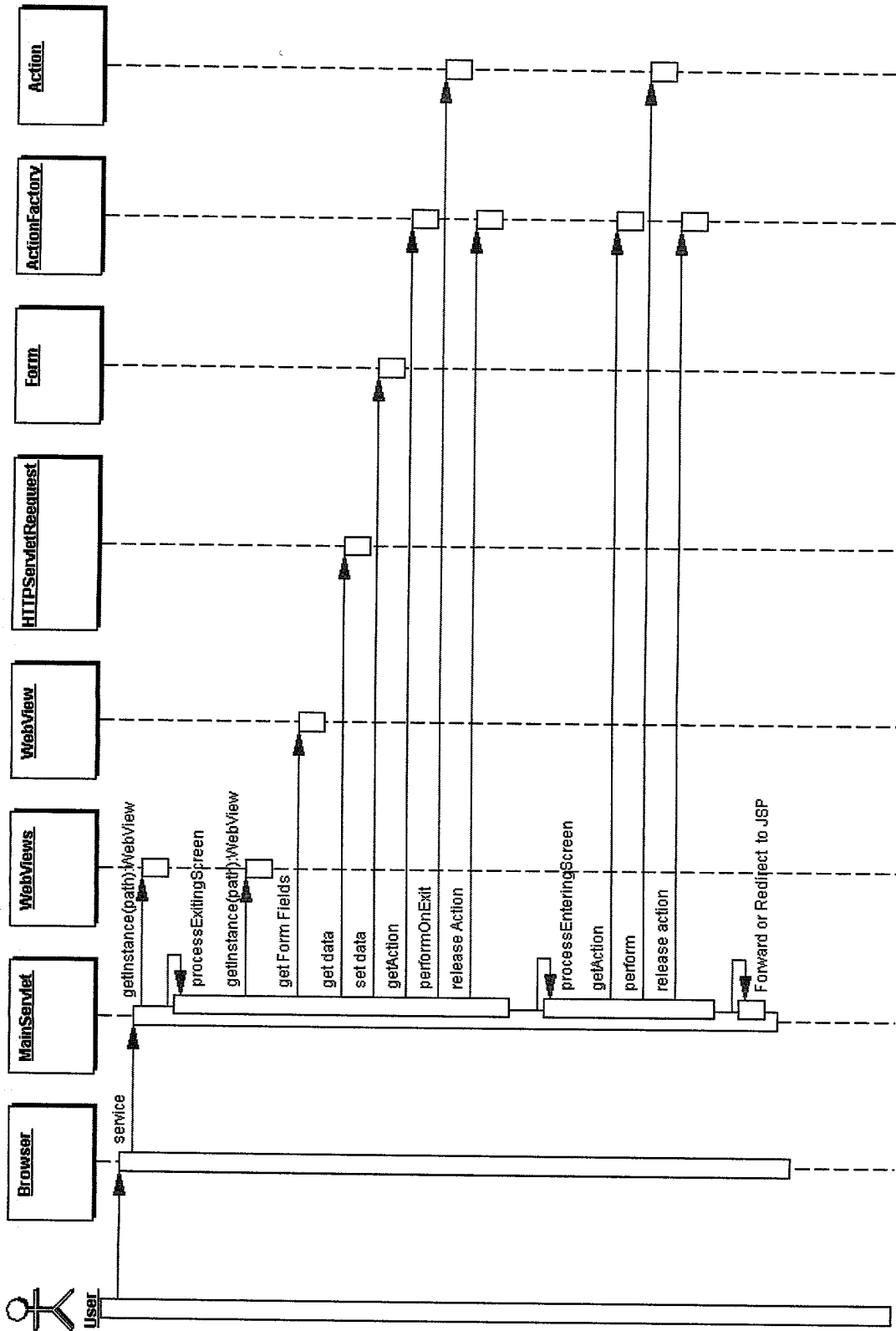


Figure 4 - ECARS 2.0 Web Application Control Processing

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### 3.2.2.2 Page Exit Processing

As mentioned above, the page exit processing is responsible for the application logic when a user exits a page in the application. Usually this entails operating on some data that the user has entered or modified on the screen. In earlier functionality, the MainServlet has processed this user data and put it into a Form object. Since this object represents screen data and not business objects, the data can be difficult to process and validate. Therefore, the Action utilizes an Adapter to take the data from a Form and places it in a Domain object. The Action can then begin to process the data or pass it to the UseCaseManager for detailed business processing or for data storage/retrieval. (This process will be described in more detail in section 3.2.2.4)

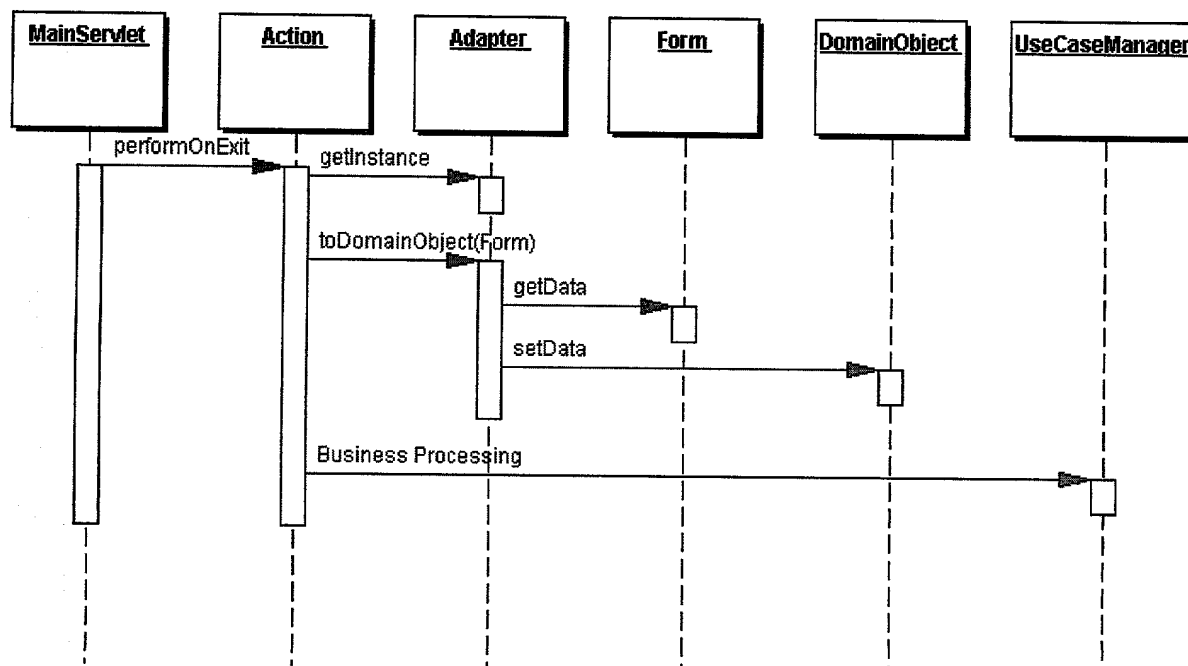
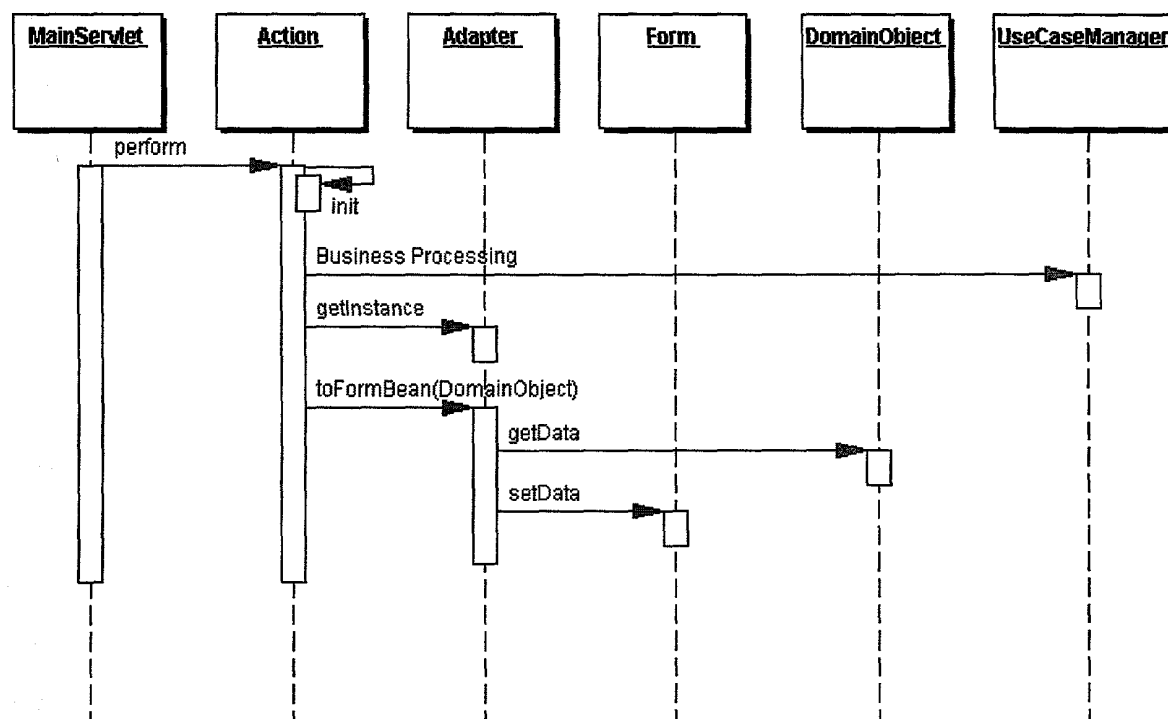


Figure 5 - ECARS 2.0 Web Application Page Exit Processing

### 3.2.2.3 Page Enter Processing

The page enter processing is typically used to initialize content for pages and to retrieve data for display. To achieve this, the Action delegates to the UseCaseManager to retrieve required data in the form of one or more Domain Objects. The Action then uses an Adapter to transform the data into a Form for display by the JSP.

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**Figure 6 - ECARS 2.0 Web Application Page Enter Processing**

### 3.2.2.4 Business Processing

The business processing is responsible for performing business validations, executing defined business processes, and managing transactions with the data sources. The process begins when the UseCaseManagerBean receives a request from a UseCaseManager or an external system. Any data passed UseCaseManagerBean is validated using a Validator object.

If valid and the business process requires saving data, the UseCaseManagerBean delegates to a DB Factory and passes the Domain Object. The DB Factory processes the Domain Object and transforms the data into a Model or set of Model classes. Additionally, if required, the DB Factory may delegate some processing to an additional DB Factory. Once data has been placed in a Model, it is passed to a DB object to execute the SQL or corresponding data access method.

Similarly, if the business processing requires retrieval of data the DB Factory delegates to the DB for data access. The DB object places the result set into one or more Model objects. The DB Factory then maps the Model data into one or more Domain Objects and passed back to the requestor.

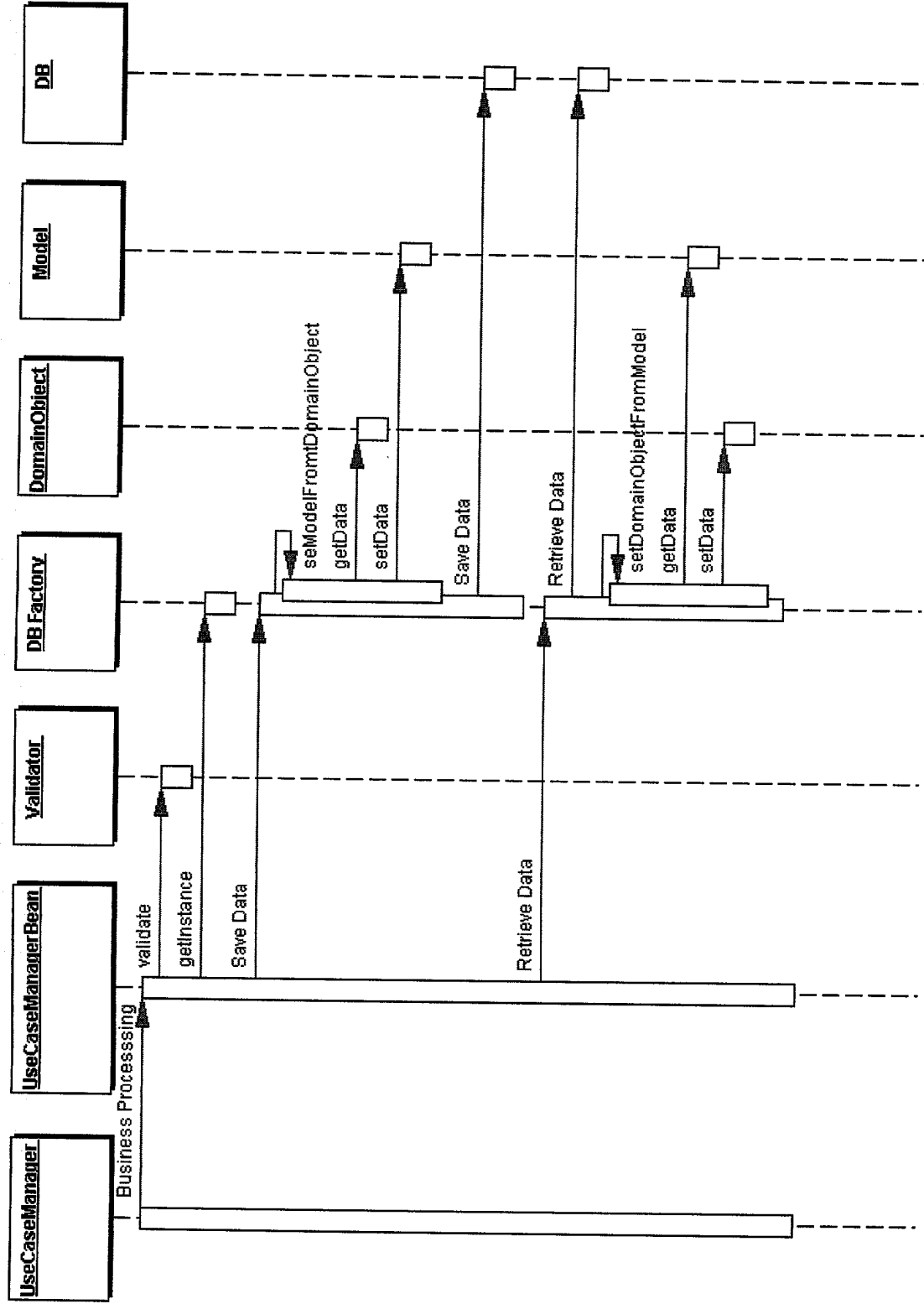


Figure 7 - ECARS 2.0 Web Application Server Processing

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### 3.3 AS/400

The existing ECARS application runs on seventeen AS/400s. The functionality is distributed by user base such that one AS/400 serves the Midwest, one serves the North East, etc.

### 3.4 AS/400 Interface Programs

#### 3.4.1 ECARS 1.0 Rates Interface

The ECARS 1.0 Rates Interface is a temporary interface required to support the initial Reservation pilot functionality. Eventually the Rates Pricing Engine will replace this interface. The current interface consists of UNIX Tuxedo services, AS/400 Tuxedo services, and AS/400 Wrapper programs. To make this architecture fault tolerant and highly available, the UNIX Tuxedo service serves as a Domain Gateway to the AS/400 Tuxedo services. This configuration allows the architecture to take advantage of Tuxedo's Domain to Domain communication model rather than having to build the failover into the ECARS 2.0 Web Application.

A typical transaction for the ECARS 1.0 Rates Interface would begin with the ECARS 2.0 Web Application making a request to a UNIX Tuxedo service through Jolt<sup>1</sup>.

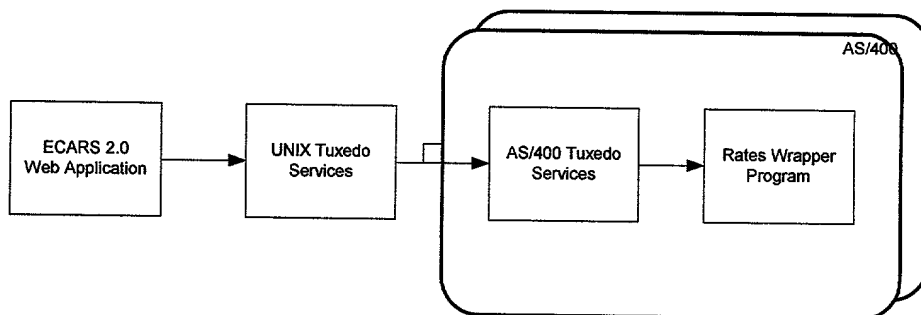


Figure 8 - ECARS 1.0 Rates Interface

<sup>1</sup> The current architecture is designed to use Jolt for all Java to Tuxedo requests. While this architecture works, it introduces complexity due to the required addition of UNIX Tuxedo. To reduce these issues, the WebLogic/Tuxedo Connector (WTC) is currently being evaluated as a potential replacement for Jolt. Using the WTC, WebLogic will act as a Tuxedo Domain and will therefore eliminate the need for a separate UNIX Tuxedo domain.

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### 3.4.2 ECARS 2.0 to ECARS 1.0 Synchronization

When data is saved in the ECARS 2.0 application, it often must be synchronized with data on the AS/400. Based on business requirements, this process is implemented asynchronously using a polling technique<sup>2</sup>. The process starts when data is saved in the ECARS 2.0 Web Application. At this point an entry is put into a queue for processing. A Java thread running within the Web Application periodically reads the queue and begins to process the entry. Because the data formats and structures are different on the two systems, the Java process begins by retrieving additional data and performing data transformations. Once complete, the Java thread sends the data to a UNIX Tuxedo service through Jolt. Similar to the ECARS 1.0 Rates Interface, the UNIX Tuxedo serves as a Domain Gateway to on one of seventeen AS/400 Tuxedo Domains. Then, the data is passed by the AS/400 Tuxedo service to a wrapper program on the AS/400. The AS/400 wrapper program performs AS/400 specific validations and the saves the data. A return code is then returned to the Java process to indicate the success or failure of the transaction.

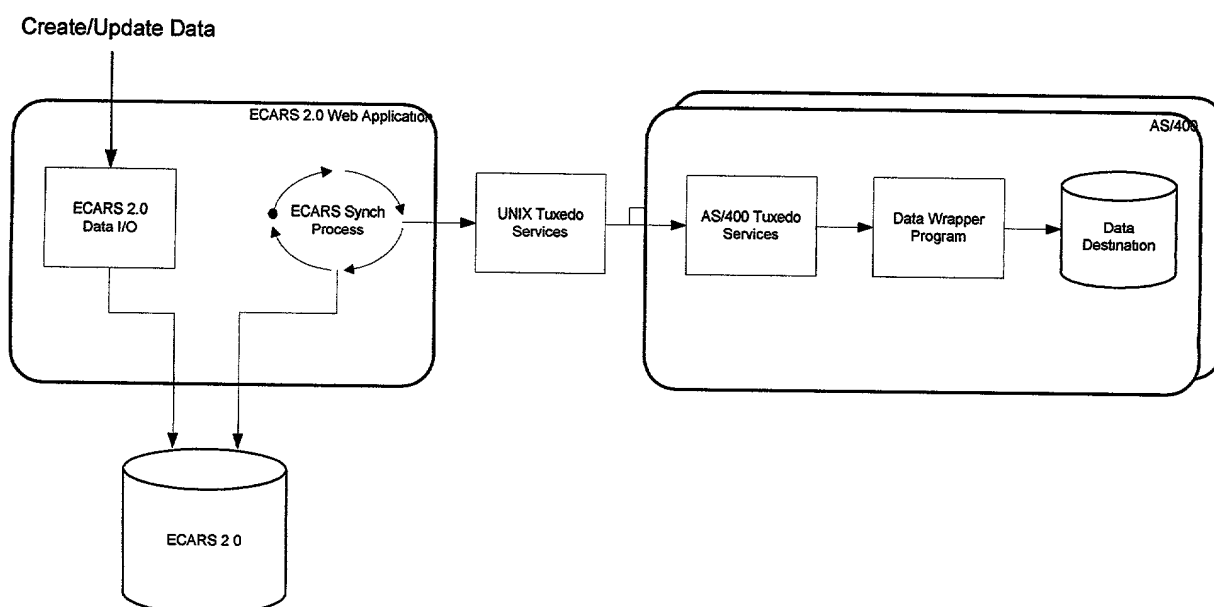


Figure 9 - ECARS 2.0 to ECARS 1.0 Synchronization

### 3.4.3 ECARS 1.0/2.0 Cross Platform Record Locking

The ECARS 1.0 application maintains a lock table to indicate record locks within the AS/400 system. External applications and other ECARS 1.0 processes verify the lock status in the table prior to locking the record. If a lock does not exist, the system enters a record in the table and then obtains a physical lock on the record in the lock file.

<sup>2</sup> Future implementations may eliminate the polling technique in favor of a JMS based asynchronous solution. This will increase performance by reducing the data retrieval requirements and by reducing the network traffic associated with polling. The JMS based solution, however, would continue to utilize the Tuxedo based architecture.

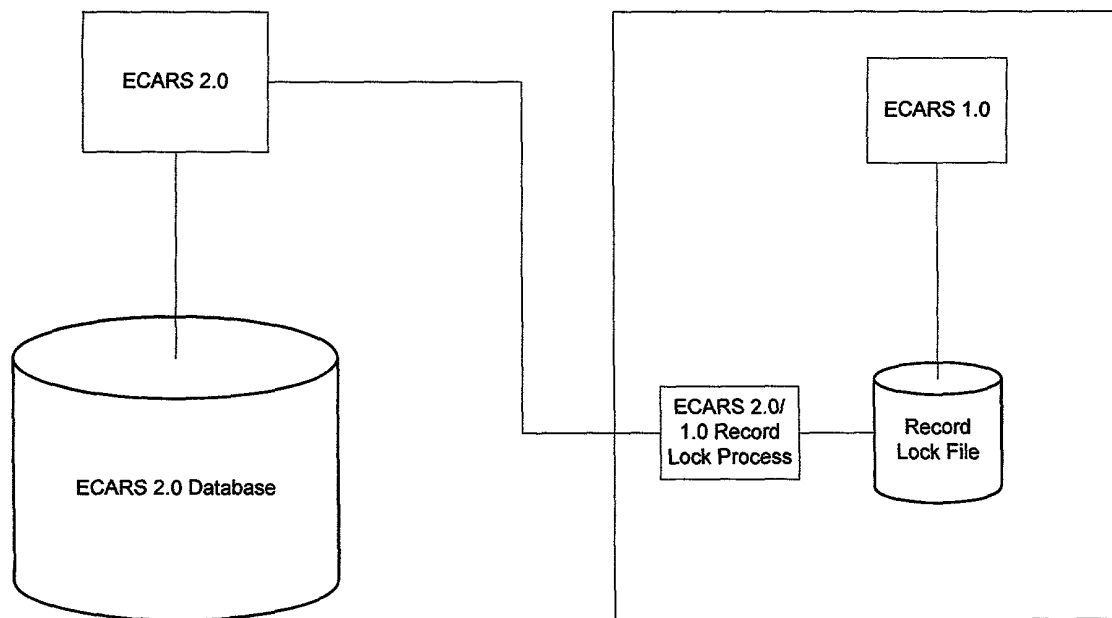


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In contrast, the ECARS 2.0 system uses time based logical locks on all transaction based data. This strategy has been implemented by adding a timestamp and user ID to the database record to indicate when and by whom a lock has been acquired. Currently, the system allows a user to hold a lock for up to thirty minutes, however this is configurable to adjust the default lock time.

Since the ECARS 1.0 and ECARS 2.0 systems will be active at the same time, there is a requirement to support cross platform record locking. Furthermore, due to the diverse AS/400 programs that use the lock file, it is desired to minimize the impact on the existing programs. Therefore, to accomplish this requirement, the ECARS 1.0 record lock file will serve as the master record lock for cross platform locks.

For a given transaction within the ECARS 2.0 system, the application would first inspect the logical lock within the ECARS 2.0 database. If the application were able to acquire the lock, it would then attempt to acquire the AS/400 lock via the ECARS 2.0/1.0 record lock process. The ECARS 2.0/1.0 record lock process would inspect the lock file to see if the transaction was locked. If not, the process would enter a record in the lock table and then acquire a physical lock. The process acquiring the lock would be configured to expire based on the same logical lock time established for the ECARS 2.0 system.



**Figure 10 - ECARS 1.0/2.0 Cross Platform Record Locking**

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### 3.5 ECARS 1.0 to ECARS 2.0 Synchronization

The ECARS 1.0 reservation data is processed thru Wrapper program(s) on the AS/400. This information is then passed to a transformation file, which contains the cross-reference data for the ECARS 2.0 and ECARS 1.0 reservation number mapping etc. There are individual triggers that map one to one with e\*Gate scripts. These E\*Gate scripts use the cross-reference file(s) for writing to the e\*Gate input transaction file IX001P. The rules specific transformation scripts will then write the data to the ECARS2.0 Oracle Data base.

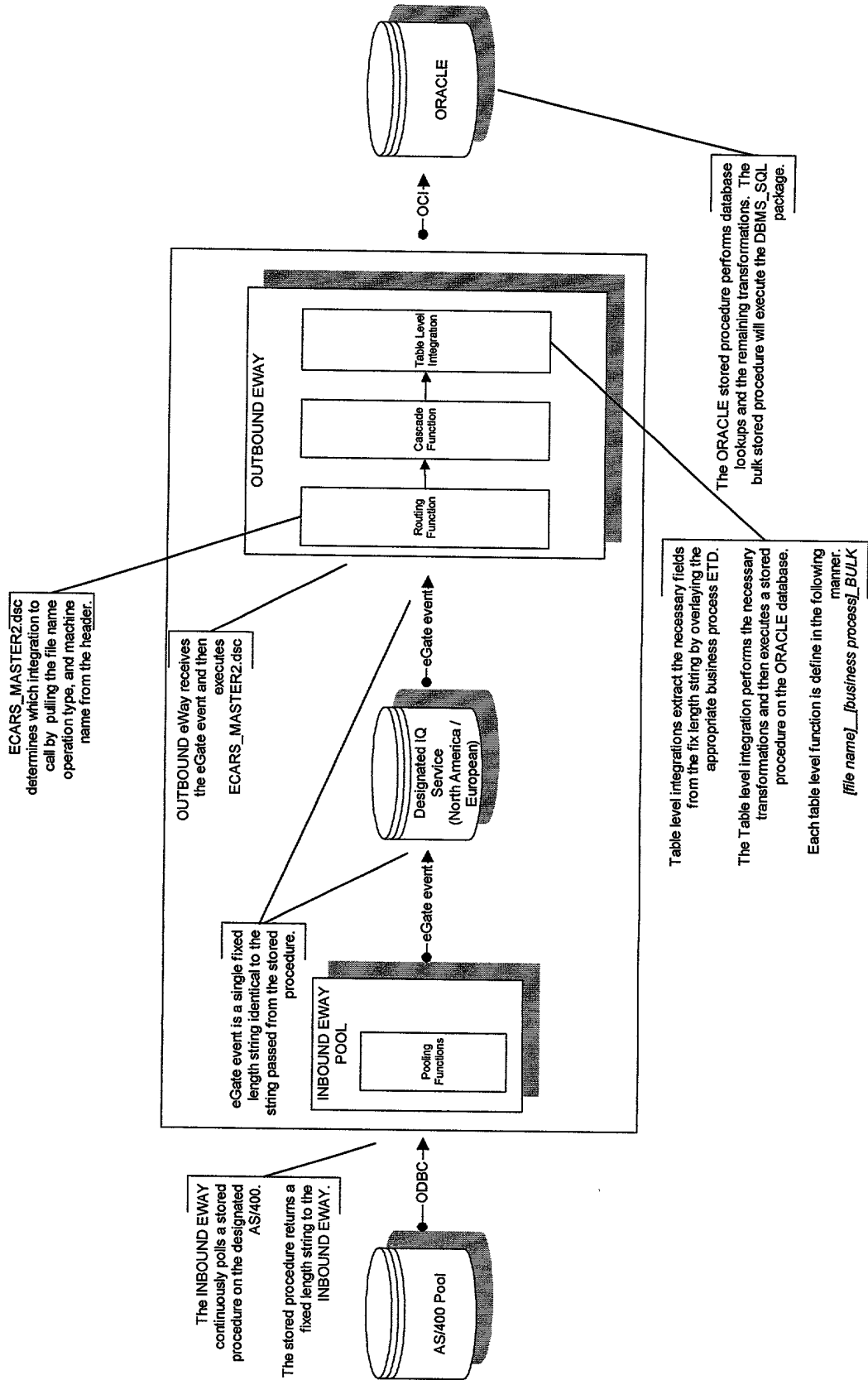


Figure 11 - ECARS 1.0 to ECARS 2.0 Synchronization

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### 3.5.1 AS/400 Stored Procedures

The AS/400 stored procedures are used to poll unprocessed data from an AS/400 transaction file.

### 3.5.2 Polling Scripts

The polling scripts are used to facilitate the execution of the AS/400 stored procedures. The data being pulled from the North American machines varies only in the size of the last fixed length field from the European machines.

### 3.5.3 Routing Script

The Routing Script is used to direct incoming files from the IQ to the correct cascade. The Routing Script first loops through each record and matches the current record to the previous records.

### 3.5.4 Cascades and Table Level Integrations

The lower two levels of the three-tier dart script architecture consists of the cascade scripts and the table level integration scripts.

### 3.5.5 Cascade

The cascade scripts basically execute each of the BULK Table Level Integrations scripts in the correct sequence. Depending on the data sorted from the Routing Script the cascade will receive the records contained in a single fixed length string. All data received will be from the same file, for the same operation, and be for North America or European. The Routing Script executes the cascades file.

### 3.5.6 Table Level Integrations

At this level, required and relevant data are mapped. There are 2 basic types of table level integration scripts: Bulk and Line mode. Bulk scripts are the primary method for data integration. Bulk scripts using the DBMS\_SQL package attempts to insert or updates up to 750 records at one time. Bulk script will not return an error, because in the event of an error the Bulk script will execute the equivalent Line script. The Line scripts are the secondary method for data integration. Line scripts attempt to update or insert a single record at a time. In the event of an error, the script will send an event to the e\*Gate monitor for each record that contained an error.

### 3.5.7 Monk Dart Scripts

There are four types of monk scripts used in this project architecture Routing, Cascade, Table Level Integrations, and Poll scripts. Most DART scripts are categorized as either Bulk or Line Table Level Integrations. Each type of script follows a common flow of logic and the only difference from script to script in a particular category is the transformation of data.

### 3.5.8 Oracle Stored Procedures

Both Bulk and Line mode dart scripts utilize Oracle PL/SQL procedures. Every monk DART script declares a specific stored procedure and assigns it to a connection handle variable. Bulk mode dart scripts call Bulk mode stored procedures, and Line mode DART scripts declare Line mode stored procedures. DART scripts then map required and relevant data to the outbound data structure (ETD). The data collected by the outbound data structures are then assigned to unique parameters in the stored procedures.

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Each line mode within the Oracle PL/SQL stored procedure implements 1 parameter, which consists of a single row of data. Each data segment is processed individually, then the stored procedures exit after performing an insert or an update operation.

### 3.6 ECARS 2.0 Database

The ECARS 2.0 Database is an Oracle 8i database with multiple schemas within the instance. Currently, the schemas include ones for transaction, transaction reference, geographic, Group/Branch, vehicle, and rates pricing engine data.

### 3.7 Rates Pricing Engine

The Rates Pricing Engine is responsible for determining rental rates for given input parameters. The functionality has been written using Pro\*C with the ECARS 2.0 database. The Rates Pricing Engine functionality will be accessed by the ECARS application using UNIX based Tuxedo services.

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## Appendix A – Further Reading

### Web Application

#### Exception Handling

\\FSCORP00\corp\_public\APPS\Ecars\_20\Program Artifacts\Architecture Program Artifacts\Design Guidelines\Exception Handling.doc

#### Logging

\\FSCORP00\corp\_public\APPS\Ecars\_20\Program Artifacts\Architecture Program Artifacts\Design Guidelines\Logging Guidelines.doc

#### Internationalization

\\FSCORP00\corp\_public\APPS\Ecars\_20\Program Artifacts\Architecture Program Artifacts\Design Guidelines\Internationalization Guidelines.doc

#### eLocation

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\\FSCORP00\corp\_public\APPS\Ecars\_20\Development Projects\Reservation Primary Use Cases\Artifacts\OO Modeling\Elocale\ELocation Overview.doc

#### Printing

\\FSCORP00\corp\_public\APPS\Ecars\_20\Development Projects\Reservation Primary Use Cases\Artifacts\OO Modeling\Print\Print Overview.doc

#### Application Locking

\\FSCORP00\corp\_public\APPS\Ecars\_20\Development Projects\Application Navigation and Security\Artifacts\OO Modeling\Service Catalog - Application Locking.doc

#### ECARS 2.0 to ECARS 1.0 Synchronization

\\FSCORP00\corp\_public\APPS\Ecars\_20\Program Artifacts\Architecture Program Artifacts\Application Interface Processes\Reservation Rental GUI to Legacy Support.doc

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<Company Name>

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## ECARS 2.0 - Insurance Detail Information Screen Action Specification

ECARS 2.0 - Insurance Detail Information  
Screen Action Specification

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## Revision History

Date	Version	Description	Author
04/12/2001	0.0	Created Template	Marty Tichy
04/16/2001	1.0	Created document	Maribeth Concannon
06/18/2001	1.1	Updated screen shots	Marty Tichy
09/04/2001	1.2	Updated spec with changes from Navigation use case.	James Atteberry
10/12/2001	1.3	Changed phone number field validations to use the same ones as the main driver screen.	James Atteberry

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## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Insurance Details screen.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Drivers – Insurance Detail

The screenshot shows a web application interface for 'Enterprise Rent-a-Car'. The browser window title is 'Insurance Detail - Microsoft Internet Explorer provided by Enterprise Rent-a-Car'. The page has three tabs: 'Reservation', 'Contracts', and 'Callbacks'. The main content area is titled 'Drivers - Insurance Detail' and includes a sidebar with navigation links: 'DRIVERS', 'REFERRAL', 'DATES/RATES', 'BILL-TO', 'VEHICLE/SHOP', and 'NOTES'. The main form contains fields for 'Driver' (Atteberry, James), 'Other Address' (Smith, Chris; Cloud, Kevin), 'Insurance Details' (Carrier, Agent, Phone), 'Insurance Company Contact' (Policy Number, Expiration Date), 'Comprehensive Deductible', 'Collision Deductible', 'Liability?', 'Assigned Risk?', and 'Lienholder Policy?'. There are 'Back' and 'Complete' buttons at the bottom. The footer shows 'Res - 411781 Tkt - 234567 Cbk - 363221'.

**Figure 1 - Insurance Detail**

### 3. Reservation Number

#### 3.1 Behavior

This area shows the unique reservation number that has been assigned to the newly created reservation. The reservation number is 6 alphanumeric characters long. If another reservation is open, its reservation number will displayed in this area as well. The user will have the ability to have to 3 reservations open at a time. A hyperlink will be available on the reservation numbers of the reservations that are NOT currently

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being displayed. For the reservation that is currently displayed, the reservation number will not have a hyperlink available. This is to allow the user to navigate between the open reservations.

### 3.2 **Validation**

None identified at this time.

### 3.3 **Business Exceptions**

If the user tries to open a 4<sup>th</sup> reservation, the system will display a message stating, "A maximum of 3 reservations may be displayed."

### 3.4 **System Exceptions**

None identified at this time.

## 4. **Insurance Details**

### 4.1 **Carrier**

#### 4.1.1 Behavior

This is an alphanumeric field.

#### 4.1.2 Validation

No validation is necessary. See Rules regarding when the field is required.

#### 4.1.3 *Business Exceptions*

None have been identified at this time.

#### 4.1.4 *System Exceptions*

None have been identified at this time.

### 4.2 **Agent**

#### 4.2.1 Behavior

This is an alphanumeric field.

#### 4.2.2 Validation

No validation is necessary. The field is optional.

#### 4.2.3 *Business Exceptions*

None have been identified at this time.

#### 4.2.4 *System Exceptions*

None have been identified at this time.

### 4.3 **Phone**

#### 4.3.1 Behavior

This is an alphanumeric field. It should comply with the standard phone number field formatting. (06/05/2001- To date, no European considerations have been noted (waiting on update to Use Case).

#### Validation

The field is optional.

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See the Special Phone Number Requirements at the end of the document for validation specifics.)

#### 4.3.2 *Business Exceptions*

None have been identified at this time.

#### 4.3.3 *System Exceptions*

None have been identified at this time.

### 4.4 **Insurance Company Contact**

#### 4.4.1 *Behavior*

This is an alphanumeric field.

#### 4.4.2 *Validation*

No validation is necessary. See Rules regarding when the field is required.

#### 4.4.3 *Business Exceptions*

None have been identified at this time.

#### 4.4.4 *System Exceptions*

None have been identified at this time.

### 4.5 **Policy Number**

#### 4.5.1 *Behavior*

This is an alphanumeric field.

#### 4.5.2 *Validation*

No validation is necessary. See Rules regarding when the field is required.

#### 4.5.3 *Business Exceptions*

None have been identified at this time.

#### 4.5.4 *System Exceptions*

None have been identified at this time.

### 4.6 **Expiration Date**

#### 4.6.1 *Behavior*

Only numeric values and delineating characters will be accepted into this area.

Associated with this field is a calendar function that allows the user to select a date from a calendar screen instead of entering a value. Clicking on the calendar icon will display the screen; once a date is selected from the screen the **Expiration Date** field will be populated with the appropriate date.

See Rules regarding when the field is required.

#### 4.6.2 *Validation*

No validation is necessary. The field is optional.

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#### 4.6.3 *Business Exceptions*

None have been identified at this time.

#### 4.6.4 *System Exceptions*

None have been identified at this time.

### 4.7 **Comprehensive Deductible**

#### 4.7.1 *Behavior*

This is a numeric field.

#### 4.7.2 *Validation*

No validation is necessary. See Rules regarding when the field is required.

#### 4.7.3 *Business Exceptions*

None have been identified at this time.

#### 4.7.4 *System Exceptions*

None have been identified at this time.

### 4.8 **Collision Deductible**

#### 4.8.1 *Behavior*

This is a numeric field.

#### 4.8.2 *Validation*

No validation is necessary. See Rules regarding when the field is required.

#### 4.8.3 *Business Exceptions*

None have been identified at this time.

#### 4.8.4 *System Exceptions*

None have been identified at this time.

### 4.9 **Liability?**

#### 4.9.1 *Behavior*

The response is either 'Yes' or 'No', but the response is optional. There is no default value.

#### 4.9.2 *Validation*

No validation is necessary. See Rules regarding when the field is required.

#### 4.9.3 *Business Exceptions*

None have been identified at this time.

#### 4.9.4 *System Exceptions*

None have been identified at this time.

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#### **4.10 Assigned Risk?**

##### **4.10.1 Behavior**

The response is either 'Yes' or 'No', but the response is optional. There is no default value.

##### **4.10.2 Validation**

No validation is necessary. The field is optional.

##### **4.10.3 Business Exceptions**

None have been identified at this time.

##### **4.10.4 System Exceptions**

None have been identified at this time.

#### **4.11 Lienholder Policy?**

##### **4.11.1 Behavior**

The response is either 'Yes' or 'No', but the response is optional. There is no default value.

##### **4.11.2 Validation**

No validation is necessary. The field is optional.

##### **4.11.3 Business Exceptions**

None have been identified at this time.

##### **4.11.4 System Exceptions**

None have been identified at this time.

#### **5. Button Line Area**

##### **5.1 Back Button**

The Back button will take the user to the main Driver screen for the currently selected driver.

##### **5.1.1 Validation**

None identified at this time.

##### **5.1.2 Business Exceptions**

None identified at this time.

##### **5.1.3 System Exceptions**

None identified at this time.

##### **5.2 Complete Button**

##### **5.2.1 Behavior**

The Complete button will initiate a save of the transaction. All validations will be performed, returning any errors to the user. If there are no errors, the transaction is saved, and the user is returned to the Reservation home page.

##### **5.2.2 Validation**

None identified at this time.

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### 5.2.3 *Business Exceptions*

None identified at this time.

### 5.2.4 *System Exceptions*

None identified at this time.

## 6. Rules

### 6.1 Required Fields

These fields are only required if information is present in any one of the following fields: Carrier, Policy Number, Expiration Date, Collision Deductible, Comprehensive Deductible, Liability, Insurance Company Contact. If the system determines that any of the listed fields are missing information, the system will present the user with a feedback message listing the incomplete required fields and directing them to complete them.

### 6.2 Saving

Because none of the information on the screen is required, the user can leave the screen at any time during the course of making or editing the reservation or while opening, editing or closing the open ticket. The save is completed when the user saves the reservation or ticket.

### 6.3 Tabbing

Tabbing between fields should be in the order that they are in this document.

## 7. Security

The user must have the appropriate security level to access this screen.

## 8. Special Phone Number Requirements

### 8.1 Overall Requirements

The database has fields for the area code and phone number.  
Area codes and phone numbers in North America are numeric only. Legacy phone numbers for North America are numeric only.  
Area codes and phone numbers in Europe may be characters or numbers. Legacy phone number for Europe are both characters and numbers.

### 8.2 Renter Specific

When navigating to a form with phone number fields, or when the page is submitted, the phone number fields will be formatted according to the system locale.

### 8.3 Insurance Phone Number

The user will have a single field to enter the phone number.  
For North America, the user may enter numbers only. All special characters will be ignored during formatting, any characters will result in an error. A space is considered a special character.  
For Europe, the user may enter characters or numbers. At least one special character must be entered. The first special character will indicate the break between the area code and the phone number. All other special characters are ignored.



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Supplementary Specification	Date: <dd/mmm/yy>
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#### 8.4 **Phone Number masking rules by country:**

- The format for North America is (XXX) XXX-XXXX
- The format for Germany is: XXX.X.XX.XX.XX  
The area code may vary in length, and is determined by a special character entered by the user to indicate where the break occurs. If the length of the phone number (not including the area code) is odd, the first character is placed by itself as shown above, the remaining characters are paired up. If the length is even, all characters are paired up.
- The format for Ireland and the UK is XXX.XXX.XXX.XXX.X  
The area code may vary in length, and is dependent on the user entering a special character between the area code and phone number. The characters following the area code should be grouped in threes with any remaining characters grouped at the end.

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The application saves the Date/Time, Status, Type, Note text and Created By data at the time the note is committed to the database.

Type = Callback

Status = reservation/ticket status as of note creation

#### 4.2.1.2 Validation

There must be data present in the Notes text field.

#### 4.2.1.3 Business Exceptions

None have been identified at this time.

#### 4.2.1.4 System Exceptions

None have been identified at this time.

### 4.2.2 Cancel button

#### 4.2.2.1 Behavior

This button will dismiss the Add Note screen without saving any data.

#### 4.2.2.2 Validation

If data has been entered the following feedback message is displayed; "Are you sure you want to exit and lose the entered information?". Two options are presented, Yes and No. Yes will dismiss the screen and not save the data, No will take the user back to the Add Note screen.

The default button selection is "No".

#### 4.2.2.3 Business Exceptions

None have been identified at this time.

#### 4.2.2.4 System Exceptions

None have been identified at this time.

## 5. View Note (Figure 3 – View Note)

This is a read only screen .

### 5.1 Data

#### 5.1.1 Behavior

This is a listing of the values associated with the selected note, this includes;

- Date/Time
- Status
- Type
- Created By
- Arms Message Status
- Note text

The Note text field should be large enough to display the entire 510 characters as defined in the database.

#### 5.1.2 Validation

No validation is necessary.

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### 5.1.3 Business Exceptions

None have been identified at this time.

### 5.1.4 System Exceptions

None have been identified at this time.

## 5.2 Button Line Area – View Note

### 5.2.1 Print button

#### 5.2.1.1 Behavior

This button will essentially print a screen print of the View Note screen .

#### 5.2.1.2 Validation

No validation is necessary.

### 5.2.1.3 Business Exceptions

None have been identified at this time.

### 5.2.1.4 System Exceptions

None have been identified at this time.

### 5.2.2 Close button

#### 5.2.2.1 Behavior

This button will dismiss the View Note screen .

#### 5.2.2.2 Validation

None have been identified at this time.

### 5.2.2.3 Business Exceptions

None have been identified at this time.

### 5.2.2.4 System Exceptions

None have been identified at this time.

## 6. Rules

### 6.1 Required Fields

The Note text field is required for creating a note. Feedback messages will be presented, as defined previously in this document, when attempting to save a note without the required information .

### 6.2 Saving

A note must be defined before the data can be saved to the database .

## 7. Security

The user must have the appropriate security level to access this screen .

**Do yECARS 2.0 - Notes Information  
Screen Action Specification**

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Do yECARS 2	Date 12/20/01
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## Revision History

Date	Version	Description	Author
07/09/2001	1.0	Created document	Marty Tichy
08/17/2001	1.1	Changes instances of 'Contract' to 'Reservation/Ticket' per Jayne Derby's logged defect.	Chris Carr
09/06/2001	1.2	Updated to reflect changes from Navigation use case.	James Atteberry
11/06/2001	1.3	Updated with new screen shot and removed the "Print Current Page" requirement.	Chris Carr
11/09/2001	1.4	Described German translation difference for 'ARMS Msg' column heading.	Chris Carr
11/20/2001	1.5	Notes text field in summary list is limited at 80, not 90, characters. Anything after that is represented by an ellipse (...).	Chris Carr

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## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Notes screen.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Screen Print

Notes - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Reservation Contracts Callbacks

DRIVERS Notes - Options - Go

Driver summary 1  
Driver summary 2

REFERRAL

Referral sum 1  
Referral sum 2

DATES/RATES

Dates summary 1  
Dates summary 2

BILL-TO

Bill-To summary 1  
Bill-To summary 2

VEHICLE/SHOP

Vehicle/Shop 1  
Vehicle/Shop 2

NOTES

Notes summary 1  
Notes summary 2

Type: ALL Status: ALL

Date/Time	Note	Status	Note Type	Created By	ARMS Msg
07/03/2001 3:22PM	Car is at Joe's Garage	CLOSE	CALLBACK	ECARS 2.0 USER	
07/02/2001 2:22PM	Does not like red cars. This shows the first two lines of the notes section.(2 @ 45 char)...	OPEN	SYSTEM	SYSTEM	SENT
07/01/2001 1:22PM	Reservation Created	RESERVATION	SYSTEM	SYSTEM	SENT

Print All Records Add Note

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

keycode=9 Local intranet

Notes screen

Figure 1 – Notes



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Add Note - Microsoft Internet Explorer pro...

Add Note

Note:

OK

Cancel

Add Note screen

Figure 2 – Add Note

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**View Note - Microsoft Internet Explorer provided by Enterprise Rent-a-Car**

**View Note**

Date: 7/02/2001 2:22PM  
Status: Open  
Type: System  
Created By: System  
Arms Msg: Sent  
Note:

Does not like red cars. This shows the first two lines of the notes section.(2 @ 45 char)

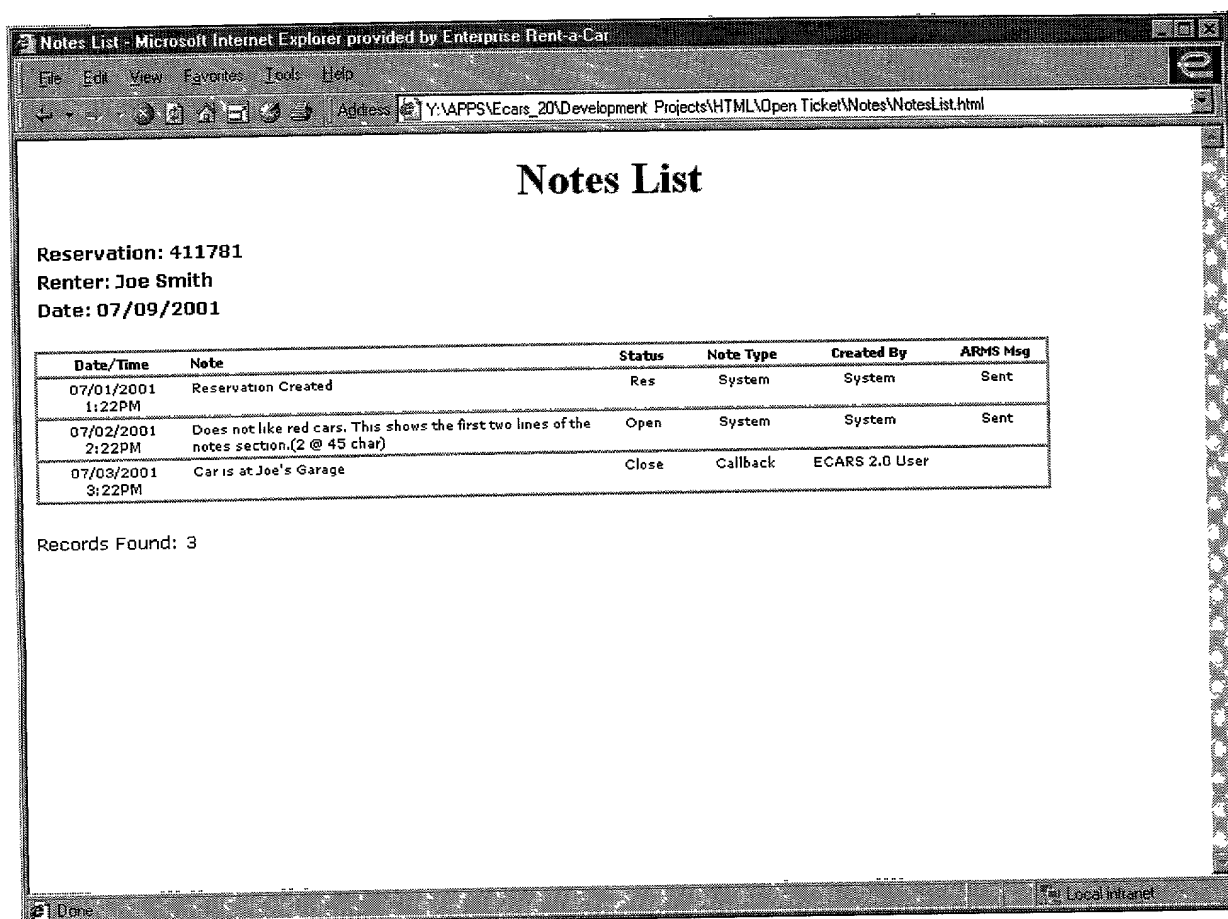
The text area shown here is big enough to show the entire database field without scrolling.

View

Note screen

**Figure 3 – View Note**

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Print All Notes report look

**Figure 4 – Print All Records**

### 3. Notes (Figure 1 – Notes)

#### 3.1 Type

##### 3.1.1 Behavior

This is a drop down field containing the following domain values:

- All
- Callback
- System

The default value is "All". The summary list is filtered by the item selected from the values list. The Status drop down list should be taken into consideration when filtering the summary list.

##### 3.1.2 Validation

No validation is necessary.

##### 3.1.3 Business Exceptions

None have been identified at this time.

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### 3.1.4 *System Exceptions*

None have been identified at this time.

## 3.2 **Status**

### 3.2.1 *Behavior*

This is a drop down field containing the following domain values:

- All
- Reservation
- Open
- Close

The default value is "All". The summary list is filtered by the item selected from the values list. The Type drop down list should be taken into consideration when filtering the summary list.

### 3.2.2 *Validation*

No validation is necessary.

### 3.2.3 *Business Exceptions*

None have been identified at this time.

### 3.2.4 *System Exceptions*

None have been identified at this time.

## 3.3 **Summary List**

### 3.3.1 *Behavior*

The result list, as describe in the use case, will have a static column display sequence. All columns need to have the capability to be sorted, ascending and descending. The user selects a Reservation/Ticket by clicking on the hyperlink associated with the desired data row. The summary list will be populated with the latest note appearing first and the earliest note appearing last (descending order sorted by date/time).

An ellipse (...) should be placed at the end of the note text field if the verbiage contained in the note exceeds 80 characters.

The user must have the appropriate security to view/edit the Reservation/Ticket selected.

This list contains the application standard for lists regarding sorting by column. The 'ARMS Msg' column header does not directly translate for Germany; rather, it is 'ARMS'.

### 3.3.2 *Validation*

None have been identified at this time.

### 3.3.3 *Business Exceptions*

None have been identified at this time.

### 3.3.4 *System Exceptions*

None have been identified at this time.

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### 3.4 Button Line Area

#### 3.4.1 *Print All Records button*

##### 3.4.1.1 Behavior

The Print All Records button will essentially generate an html report and send it to the printer. This will allow the user to print the entire collection of notes associated with a reservation/ticket. This report will not be sent to the screen, it will only be sent to the printer. (See Figure 4 – Print All Records.)

##### 3.4.1.2 Validation

No validation is necessary.

##### 3.4.1.3 Business Exceptions

None have been identified at this time.

##### 3.4.1.4 System Exceptions

None have been identified at this time.

#### 3.4.2 *Add Note button*

##### 3.4.2.1 Behavior

The Add Note button will display the Add Note screen for data input. (See Figure 2 – Add Note.)

##### 3.4.2.2 Validation

No validation is necessary.

##### 3.4.2.3 Business Exceptions

None have been identified at this time.

##### 3.4.2.4 System Exceptions

None have been identified at this time.

#### 3.4.3 *Previous Button*

##### 3.4.3.1 Behavior

The Previous button will take the user to the Vehicle/Shop screen within the same transaction.

##### 3.4.3.2 Validation

No validation is necessary.

##### 3.4.3.3 Business Exceptions

None have been identified at this time.

##### 3.4.3.4 System Exceptions

None have been identified at this time.

#### 3.4.4 *Next Button*

##### 3.4.4.1 Behavior

The Next button will take the user to the Drivers screen within the same transaction.

Do yECARS 2	Date 12/20/01
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#### 3.4.4.2 Validation

No validation is necessary.

#### 3.4.4.3 Business Exceptions

None have been identified at this time.

#### 3.4.4.4 System Exceptions

None have been identified at this time.

### 3.4.5 Complete Button

#### 3.4.5.1 Behavior

The Complete button will initiate a save of the transaction. All validations will be performed, returning any errors to the user. If there are no errors, the transaction is saved, and the user is returned to the Open Ticket home page.

#### 3.4.5.2 Validation

No validation is necessary.

#### 3.4.5.3 Business Exceptions

None have been identified at this time.

#### 3.4.5.4 System Exceptions

None have been identified at this time.

## 4. Add Note (Figure 2 – Add Note)

### 4.1 Note

#### 4.1.1 Behavior

This is a free form text field in which the user may enter data.

#### 4.1.2 Validation

There must be data present in order for the note to be saved.

#### 4.1.3 Business Exceptions

None have been identified at this time.

#### 4.1.4 System Exceptions

None have been identified at this time.

### 4.2 Button Line Area – Add Note

#### 4.2.1 OK button

##### 4.2.1.1 Behavior

If data is not present in the Notes text field the feedback message reads, "Please enter a Note if selecting to Save." Two options are presented, OK and Cancel. Ok will take the user back to the Add Note screen for data entry, Cancel will dismiss the Add Note screen.

Ok will be the default selection.

**Enterprise Rent-A-Car**

## ECARS 2.0 - Open Ticket Search Screen Action Specification

Year	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	

	Version: <1.0>
ECARS 2	Date: <dd/mm/yy>
<document identifier>	

## Revision History

Date	Version	Description	Author
04/12/2001	1.0	Created Template	Marty Tichy
04/16/2001	2.0	Created document	Marty Tichy
04/18/2001	2.1	Modified Account Name/Number search capability to limit it to Bill-To/Shop, changed verbiage on screen shots as well.	Marty Tichy
04/19/2001	2.2	Removed the items that were added in 2.1	Marty Tichy
05/08/2001	2.3	Added field disabling/enabling subsequent to search invocation logic	Marty Tichy
05/14/2001	2.4	Modified field behavior subsequent to search invocation logic	Marty Tichy
06/12/2001	2.5	Replaced screen shots.	Marty Tichy



	Version: <1.0>
ECARS 2	Date: <dd/mmm/yy>
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## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Open Ticket Search screen, and its related screens.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Screen Print

Figure 1 - Initial Entry – Simple Search

	Version: <1.0>
ECARS 2	Date: <dd/mmm/yy>
<document identifier>	

Enterprise ECARS Application - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Reservation Contracts Callbacks Rates Tools Help ARMS

### Open Ticket Search

Group:  Branch:  [Advanced Search](#)

Ticket Number:  Renter Last Name:  Renter First Name:  Renter Telephone Number:

GR/BR	Renter Name	Phone #	Unit #	RO/PO/Claim #	Unit Plate #	Open Date	Bill-To/Shop	Ticket #
0101	AQUILINO, BEATRICE	2022543525	30622C8G6WXH3WSSURLZY04			02/03/2001	ALLSTATE INS-ST. LOUIS**	3HXW6G
0101	AQUILINO, BEATRICE	2022543525	30622C8G6WXH3WSSURLZY04			02/03/2001	ALLSTATE INS-ST. LOUIS**	3HXW6H
0101	AQUILINO, BEATRICE	2022543525	30622C8G6WXH3WSSURLZY04			02/03/2001	ALLSTATE INS-ST. LOUIS**	3HXW6I

Items 1 - 3 of 3 found

First Prev 1 Next Last

Figure 2 - Simple Search with Search Results



ECARS 2	Version: <1.0>
<document identifier>	Date: <dd/mmm/yy>

Enterprise ECARS Application - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Reservation Contracts Callbacks Rates Tools Help ARMS

### Open Ticket Search

Group:  Branch:  [Simple Search](#)

Ticket Number:  Renter Last Name:  Renter First Name:  Renter Telephone Number:

RO/PO/Claim Number:  Unit Number:  Unit Plate Number:  Open Ticket Date:

☒ Bill-To/Shop Name ☐ Bill-To/Shop Number

GR/BR	Renter Name	Phone #	Unit #	RO/PO/Claim #	Unit Plate #	Open Date	Bill-To/Shop	Ticket #
0101	AQUILINO, BEATRICE	2022543525	30622C8G6WXH3WSSURLZY04			02/03/2001	ALLSTATE INS-ST. LOUIS**	3HXW6G
0101	AQUILINO, BEATRICE	2022543525	30622C8G6WXH3WSSURLZY04			02/03/2001	ALLSTATE INS-ST. LOUIS**	3HXW6H
0101	AQUILINO, BEATRICE	2022543525	30622C8G6WXH3WSSURLZY04			02/03/2001	ALLSTATE INS-ST. LOUIS**	3HXW6I

Items 1 - 3 of 3 found

[First](#) [Prev](#) [1](#) [Next](#) [Last](#)

Figure 4 - Advanced Search with Search Results

-1		July 2001					+1
mon							mon
Sun	Mon	Tue	Wed	Thu	Fri	Sat	
1	2	3	4	5	6	7	
8	9	10	11	12	13	14	
15	16	17	18	19	20	21	
22	23	24	25	26	27	28	
29	30	31					

Figure 5 - Calendar selection

### 3. Group

#### 3.1 Behavior

This search criterion will be limited to active rental groups. The selection of "All" is also included, and will appear at the top, or first, in the list . This search criteria area will be a drop-down box. The users would also like to have the ability to type a character, alpha or numeric, into the criteria area and have the drop down list position to the character. (If the user enters an "H" the drop down list would position to the first string beginning with "H" in the list) The default item should be the group associated to the terminal locale .

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ECARS 2	Date: <dd/mmm/yy>
<document identifier>	

### 3.2 Validation

The items appearing in the list are static; the user cannot add items to the list dynamically.

### 3.3 Business Exceptions

The user should not be allowed to view or select a group outside of security parameters.

### 3.4 System Exceptions

None identified at this time.

## 4. Branch

### 4.1 Behavior

This search criterion will be limited to active branches. The selection of "All" is also included, and will appear at the top, or first, in the list. This search criteria area will be a drop-down box. The users would also like to have the ability to type a character, alpha or numeric, into the criteria area and have the drop down list position to the character. (If the user enters an "H" the drop down list would position to the first string beginning with "H" in the list)

The default item should be the branch associated to the terminal locale. Branch items appearing in the list will be limited to the Group item selected. Once the selected Group item has changed, the first item (All) will be the default selection item.

### 4.2 Validation

The items appearing in the list are static; the user cannot add items to the list dynamically.

### 4.3 Business Exceptions

The user should not be allowed to view or select a branch outside of security parameters.

### 4.4 System Exceptions

None identified at this time.

## 5. Ticket Number

### 5.1 Behavior

This search area will be an alphanumeric field. It will return exact matches for the characters entered. When this search criterion is used, any other entered criteria will be ignored by the system. Alphanumeric values will be accepted into this field.

### 5.2 Validation

None identified at this time.

### 5.3 Business Exceptions

None identified at this time.

### 5.4 System Exceptions

None identified at this time.

## 6. Renter Name Last / First

### 6.1 Behavior

This search criteria area will be an text field containing an implied wildcard after the entered criteria. The First Name field will not be enabled until search criteria has been entered into the Last Name field. Thus,

ECARS 2	Version: <1.0>
<document identifier>	Date: <dd/mmm/yy>

the First Name field will not be accessible via either the tab key or the mouse unless Last Name data is present.

It should be noted that either **Last Name** or **Last Name and First Name** used in combination, is considered to be just one search criteria.

It will return exact matches for the characters entered and will continue with other text strings that match the characters entered, but are of a longer length (an implied wildcard). Example: If the **Last Name** search criteria entered were "Smith", you would receive back every open ticket with "Smith" in the Last name. You would also receive every character string that matched "Smith" for the first 5 characters, but was longer than five characters. Given this, you would also receive, "Smither", "Smithson", "Smithy", etc. These longer character matches would be alphabetically ascending after the exact character matches of equal length. The First Name field behaves in the same manner.

## 6.2 Validation

None identified at this time.

## 6.3 Business Exceptions

None identified at this time.

## 6.4 System Exceptions

None identified at this time.

# 7. Renter Telephone Number

## 7.1 Behavior

This search criteria area will be an alphanumeric field. It will not be formatted for presentation purposes. Returns exact matches for the characters entered . A phone number is considered to be the entire number including area code. Example: In the United States, it would be the 3 digit area code, plus the seven digit phone number. (Country Code is not considered a part of the phone number.) The search will be on all phone number fields associated with the Driver/Renter. Currently, these are Home, Office and Other.

## 7.2 Validation

None identified at this time.

## 7.3 Business Exceptions

None identified at this time.

## 7.4 System Exceptions

None identified at this time.

# 8. RO/PO/Claim Number

## 8.1 Behavior

This search criteria area will be an alphanumeric field. Returns exact matches for the characters entered .

## 8.2 Validation

None identified at this time.

## 8.3 Business Exceptions

None identified at this time.



	Version: <1.0>
ECARS 2	Date: <dd/mmm/yy>
<document identifier>	

#### 8.4 System Exceptions

None identified at this time.

### 9. Unit Number

#### 9.1 Behavior

This search criteria area will be an alphanumeric field.  
Returns exact matches for the characters entered.

#### 9.2 Validation

None identified at this time.

#### 9.3 Business Exceptions

None identified at this time.

#### 9.4 System Exceptions

None identified at this time.

### 10. Open Ticket Date

#### 10.1 Behavior

Only numeric values will be accepted into these areas. The search to the database will be an exact numeric, time stamp match. Associated with this field, is a calendar function that allows the user to select a date from a calendar screen, or similar feature, instead of entering a value (Figure 5 - Calendar selection). Clicking on the calendar icon will display the screen, once a date is selected from the screen the Open Ticket Date field will be populated with the appropriate date.

Returns exact matches for the characters entered. It will not be formatted for presentation purposes. The user may enter delineating characters, but these will be stripped out before searching the database to find an exact date match.

#### 10.2 Validation

None identified at this time.

#### 10.3 Business Exceptions

None identified at this time.

#### 10.4 System Exceptions

None identified at this time.

### 11. Unit Plate Number

#### 11.1 Behavior

This search criteria area will be an alphanumeric field.  
Returns exact matches for the characters entered.

#### 11.2 Validation

None identified at this time.

#### 11.3 Business Exceptions

None identified at this time.

	Version: <1.0>
ECARS 2	Date: <dd/mmm/yy>
<document identifier>	

#### 11.4 System Exceptions

None identified at this time.

### 12. Bill-To/Shop Name/Number Group

This group of controls includes the Bill-To/Shop Name and the Bill-To/Shop Number radio buttons as well as a criteria text box.

#### 12.1 Behavior

This search criteria area will be an alphanumeric field regarding the text field. The Bill-To/Shop Name radio button will be the default selection upon screen entry.

When the Bill-To/Shop Name radio button is selected an implied wildcard will be added at the end of the entered search criteria. Example: If the **Bill-To/Shop Name** search criteria entered were "Smith", you would receive back every open ticket with "Smith" in the Bill-To/Shop name. You would also receive every character string that matched "Smith" for the first 5 characters, but was longer than five characters. Given this, you would also receive, "Smither", "Smithson", "Smithy", etc. These longer character matches would be alphabetically ascending after the exact character matches of equal length.

When the Bill-To/Shop Number radio button is selected it returns exact matches for the characters entered.

An entry into this field will search the Bill-To and Shop roles that an account (customer) may be and return all matches. Currently, the roles to which the search may be applied are "Shop" and "Bill-To".

#### 12.2 Validation

None identified at this time.

#### 12.3 Business Exceptions

None identified at this time.

#### 12.4 System Exceptions

Only one radio button can be selected at a given time.

### 13. Search Results Area

#### 13.1 Behavior

The result list will have a static column display sequence. All columns need to have the capability to be sorted, ascending and descending. The user selects an Open Ticket by clicking on the hyperlink associated with the desired data row.

The user must have the appropriate security to view/edit the open ticket selected.

#### 13.2 Validation

None identified at this time.

#### 13.3 Business Exceptions

None identified at this time.

#### 13.4 System Exceptions

None identified at this time.

	Version: <1.0>
ECARS 2	Date: <dd/mmm/yy>
<document identifier>	

## 14. Advanced Search / Simple Search hyperlink

### 14.1 Behavior

By clicking on the Advanced Search hyperlink, the user is presented with the advanced search functionality (Figure 3 - Advanced Search). Alternatively, by clicking on the Simple Search hyperlink, the user is presented with the default search screen (Figure 1 - Initial Entry – Simple Search). Any search criteria entered when on the default search screen will be passed to the Advanced Search screen if/when accessed. If the user navigates to the Simple Search screen from the Advanced Search screen, any search criteria entered into the advanced criterion that is not found on simple search will be lost.

### 14.2 Validation

None identified at this time.

### 14.3 Business Exceptions

None identified at this time.

### 14.4 System Exceptions

None identified at this time.

## 15. Results Feedback Line Area

### 15.1 Behavior

This feedback area provides the user with the search result list count as well as list navigation. The user may select the block of records available as returned by the invoked search criteria. These blocks are identified by sequential numbers, along with a First (1<sup>st</sup> block of records) and Last (last block of records). Also appearing will be the Prev and Next. When negotiating through the result list the sequential numbers will change depending upon the block of records being viewed, other blocks of records can be accessed via the Prev and Next hyperlinks. For example looking at the Figure 2 - Simple Search with Search Results if the user selected Next, the sequential numbers listed will range from 2-6. If the user wishes to return to record block 1, they can either select First or Prev to view record blocks 1-5 again.

### 15.2 Validation

None identified at this time.

### 15.3 Business Exceptions

None identified at this time.

### 15.4 System Exceptions

None identified at this time.

## 16. Button Line Area

### 16.1 Behavior

The Search image/button will invoke the search process, submitting the form to the server. The search can be invoked by clicking on the button or the user using the enter key.

	Version: <1.0>
ECARS 2	Date: <dd/mmm/yy>
<document identifier>	

The Reset control will return the screen to its default state. The default state being search criteria controls blank, group/branch default to terminal locale and an empty result area.

The system should determine that no more than the set limit of three search criteria have been entered.

## 16.2 Validation

None identified at this time.

## 16.3 Business Exceptions

A limit of three search criteria may be entered.

If Ticket Number is entered, all other search criteria are ignored .

## 16.4 System Exceptions

If more than three search criteria are entered the user should be presented with a feedback message stating "A limit of three search criteria may be entered, Please refine your search."

## 17. Rules

The Renter Name Last / First and Account Name search criteria have an implied wild card character placed directly after the entered text, all other search criteria fields on this screen are to be treated as exact matches with searching.

The user may invoke the search without changing or adding any search criteria to the default screen entry criteria. The user may increase the scope of the search by selecting all groups and/or all branches, no detailed search criteria is necessary when using this screen.

There is a limit of three search criteria on which a search may be executed. This does not include the Group and Branch selections. If more than three are entered the system will present to the user an appropriate feedback message stating that a maximum of three search criteria may be entered. This message will be displayed a form submittal.

When there are not any matches to the input search criteria the user should be presented with a feedback message stating no items were found. This text should appear in the 0 listed below.

- 1) If the search returns more open tickets than can be displayed on the screen at one time, then the system needs to present to the user the range of records they are viewing out of the total number of records

All of the following search criteria, EXCEPT Ticket Number, will be limited to, or constrained by, the Group and Branch indicated or selected.

## 18. Security

The user must have the appropriate security level to access this screen.

**Version <1.0>**

	Version: <1.0>
ECARS 2	Date: 12/4/2001

## Revision History

Date	Version	Description	Author
12/04/2001	1.0	Created document	Marty Tichy

	Version: <1.0>
ECARS 2	Date: 12/4/2001

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## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Open Ticket without Payment Use Case. This document also extends the screen action specification documents associated with the reservation iteration, which includes the following screens:

- Driver
- Additional Driver
- Other Address
- Insurance Detail
- Cash Qualification
- Referral
- Bill-To
- Vehicle / Shop
- Dates / Rates
- Notes
- Application Locking

The user enters the new ticket process via the menu Tickets:New. This process behaves in the same manner as the previously defined Reservation process, opening a new record as an open ticket rather than a reservation.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.



ECARS 2	12/20/2001

## 2. Screen Prints

E38466 0101 Enterprise ECARS Application - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

Reservation Tickets Callbacks Vehicle Tools Help

**DRIVERS** Driver - Options - Go Add Drivers

Renter

**REFERRAL** Driver Other Address Insurance Detail Cash Qualification

**DATES/RATES** Clear

**BILL TO**

**VEHICLE/SHOP**

**NOTES**  
Notes Taken : 1

Tkt -139VC2

Driver Name and Address

Last Name: \* First Name: \*

Phone Numbers Home: Work: Extension: Employer: Other Phone and Type:

Home Address Address: \* ZIP: \* Country: \* City: \* State: \*

Drivers License License Number: \* Expiration Date: \* Issuing Country: State Issued: \* SSN: \* Date of Birth: \* Eye Color: \* Height: \* Hair Color: \* Weight: \*

Primary Payment Method:

Next Complete

Figure 1 - Driver

**DRIVERS** **Driver** **Options** **Add Drivers**

Additional Drivers: 1 **Renter** **Driver**

**REFERRAL** **Driver** **Other Address** **Insurance Detail** **Cash Qualification**

**DATES/RATES** **Clear** **Delete**

**BILL-TO**

**VEHICLE/SHOP**

**NOTES** Notes Taken : 1

**Driver Name and Address**

Last Name:\* First Name:\*

Phone Numbers

Home: Work: Extension:

Employer:

Other Phone and Type:

**Home Address**

☐ Same as Renter

Address:

ZIP: Country:

City: State:

**Drivers License**

License Number: Expiration Date:

Issuing Country: State Issued:

UNITED STAT Date of Birth: \*

SSN: Eye Color: Height:

Hair Color: Weight:

Credit Card Number Credit Card First Name Credit Card Last Name

Credit Card Type CC Expiration Date

Tkt -139VC2 **Next** **Complete**

Figure 2 – Additional Driver

**Complete -- Web Page Dialog**

**Complete**

☒ Complete

☐ Complete - Unit Pend

☐ Complete - Pre-Write

**OK** **Cancel**

Figure 3 - Complete

### 3. Driver

#### 3.1 Driver

##### 3.1.1 Behavior

This screen primarily behaves in the same manner as in Reservation. The following fields are required for this process:

- Last Name

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- First Name
- Address
- Zip
- Country
- City
- State
- License Number
- Expiration Date
- State Issued
- Date of Birth
- Social Security Number
- Height
- Eye Color
- Weight
- Hair Color

All conditionally required fields and behaviors defined during the Reservation iteration apply

### 3.1.2 Validation

No validation is necessary.

### 3.1.3 Business Exceptions

None have been identified at this time.

### 3.1.4 System Exceptions

None have been identified at this time.

## 4. Additional Driver

### 4.1 Additional Driver

#### 4.1.1 Behavior

This screen primarily behaves in the same manner as in Reservation. The following fields are required for this process:

- Last Name
- First Name
- Date of Birth

The following fields are conditionally required for this process:

- If License Number is entered then
  - State Issued
  - Expiration Date (Drivers License section)
- If Address is entered then
  - Last Name
  - First Name
  - Zip

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- Country
- City
- State

All conditionally required fields and behaviors defined during the Reservation iteration apply.

#### 4.1.2 Validation

No validation is necessary.

#### 4.1.3 Business Exceptions

None have been identified at this time.

#### 4.1.4 System Exceptions

None have been identified at this time.

### 5. Complete

The complete process primarily behaves in the same manner as that defined in the Reservation iteration with the exception of the items listed below. This includes confirmation dialogs and validations.

#### 5.1 Form

##### 5.1.1 Behavior

Only one selection can be made. The default selection will be "Complete".

The OK button will invoke the validation and save process.

The Cancel button will dismiss the form, placing the user back to where they invoked the process.

##### 5.1.2 Validation

Complete - When this option is selected all validations are invoked. This includes the required fields defined in the Driver and Additional Driver sections above as well as those conditionally required fields and validations defined in the Reservation iteration. ***During this iteration of the Open Ticket project a ticket will cannot be saved in this status due to the missing Unit Pend data described below. Thus during this iteration a ticket can be saved in Complete – Pre-Write or Complete – Unit-Pend status only.***

Complete – Unit-Pend - When this option is selected all validations except those involving an assigned unit are invoked. ***This includes Unit Number and License Plate Number which currently do not exist in the screens being used, these will be added to the Dates/Rates screen in future iterations of the Open Ticket project.***

Complete – Pre-Write - When this option is selected the Drivers Last and First names along with the Billing Cycle from the Dates/Rates screen and only those validations that are conditional required information are invoked. These sets of validations are primarily defined in the Reservation use cases.

If the user selects to save a ticket and it fails the necessary validation, the system will provide a feedback message listing the offending items. The user will then be allowed to save the ticket in a "lesser" open ticket status via the "Complete" button.

##### 5.1.3 Business Exceptions

None have been identified at this time.

##### 5.1.4 System Exceptions

None have been identified at this time.

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## 6. Rules

### 6.1 Required Fields

Since this document is an extension of the screen action specification document defined in the Reservation and Open Ticket projects, the required fields and conditionally required fields along with all of the associated validations pertain to this document as well.

### 6.2 Saving

The save is completed when the user saves the ticket. When the ticket saves successfully the application will navigate to the Ticket Search screen.

## 7. Security

The user must have the appropriate security level to access the screens.

## ECARS 2.0 - Open Ticket Retrieve Rates Screen Action Specification

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# Enterprise Rent-A-Car

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## Revision History

Date	Version	Description	Author
9/20/2001	1.0	Created Document	Johnny S. Johnston
10/10/2001	1.1	Revisions after second prototype meeting	Johnny S. Johnston

CONFIDENTIAL

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# Enterprise Rent-A-Car

## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Open Ticket Retrieve Rate(s) screens.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Open Ticket Retrieve Rates - Screens

**Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car**

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss

Address: file:///N:/APPS/Ecars\_20/Development%20%20Projects/HTML/Open%20Ticket/Rates/Rates.html#RateSource

Links: Customize Links Free Hotmail STL today news special report

Reservation Contracts Callbacks

**Dates/Rates** - Options - Go

**DRIVERS**

Driver summary 1

Driver summary 2

**REFERRAL**

Referral sum 1

Referral sum 2

**DATES/RATES**

Dates summary 1

Dates summary 2

**BILL-TO**

Bill-To summary 1

Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1

Vehicle/Shop 2

**NOTES**

Notes summary 1

Notes summary 2

Unit # License Plate # Last 6 of VIN Units Available

2000 Chevrolet Impala ICAR

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

keycode=44 Local intranet

Top portion of Rates panel

# Enterprise Rent-A-Car

Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss

Address: file:///Y:/APPS/Ecars\_20/Development%20%20Projects/HTML/Open%20Ticket/Rates/Rates.html#RateSource

Links: Customize Links Free Hotmail Windows STL today news special report

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Dates/Rates** - Options - Go

- Select -

Unit Information  
Vehicle Preferences

Unit # License Plate # Last 6 of VIN

Units Available

2000 Chevrolet Impala ICAR

Class to Charge for Get Rates

Rates

Daily		Weekly		Monthly		Hourly	Mileage	No
Rate	Mileage	Rate	Mileage	Rate	Mileage	Rate	Charge	Charge
15.99	150	59.99	750	179.99	1500	5.99	0.15	<input type="checkbox"/>

Coverages CDW,PAI,SLP

OK Cancel

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

Keycode-44 Local intranet

Bottom portion of Rates Panel

# Enterprise Rent-A-Car

Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss

Address: file:///Y:/APPS/Ecars\_20/Development%20%20Projects/HTML/Open%20ticket/Rates/Rates.html#RateSource

Links: Customize Links Free Hotmail Windows STToday news special report

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Dates/Rates** - Options - Go

Pickup Date: 10/04/2001 Time: 9:00 AM Return Date: 10/08/2001 Time: 3:00 PM

Start Charges if Different Change Return Information

Select Date For Charges To Start X DP Elco Chevrolet

Account Number Account Search

Date Time Billing Cycle

Last 6 of VIN Units Available

2000 Chevrolet Impala ICAR

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

Local intranet

Start Charges if Different pop-up box

# Enterprise Rent-A-Car

Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss

Address: file:///Y:/APPS/Ecars\_20/Development%20%20Projects/HTML/Open%20Ticket/Rates/Rates.htm#RateSource

Links: Customize Links Filed HTML Windows ST Today news special report

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Dates/Rates** - Options - Go

Pickup Date: 10/04/2001 Time: 9:00 AM Return Date: 10/08/2001 Time: 3:00 PM

Start Charges if Different Change Return Information

10/04/2001 9:00 Change Return Information

Rate Source Select Return Location  
Account Name Group: Branch: Method: Location: OK Cancel

Unit Information  
Vehicle Preferences  
Unit # License Plate # Last 6 of VIN Units Available

2000 Chevrolet Impala ICAR

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

Local intranet

Change Return Information pop-up box



# Enterprise Rent-A-Car

Reservation Dates and Rates Screen Spec - Microsoft Word

File Edit View Insert Format Tools Table RequestPro Window Help

Normal Times New Roman B I U

All Entries -

1 2 3 4 5 6

Reservation Dates and Rates Screen Spec

Options Go

Rate Source

Account Name Account Number Rental Type

Select Search

Accounts

Account Name	Account Number	Account Type	Company	Address	City	State	Zip	Telephone
A. Collector's Bank	061458	Corporate	0101	6275 Delmar	St. Louis	MO	63120	(314) 721-6127
A. J. Remondine Co.	061222	Corporate	0102	312 Oak Pl.	Wildeed	MO	63040	(606) 456-1552
Account Lincoln	123428	Dealership	0103	9700 Manchester Rd	St. Louis	MO	63119	(314) 968-5300
Advantage	060853	Corporate	0104	1601 North 7th St.	St. Louis	MO	63102	(314) 436-1419
Admiral Army Corp. Of	061338	Corporate	0105	325 Dahlman	St. Louis	MO	63112	(314) 361-2268
Admiral	060820	Corporate	0106	7743 Arthur	St. Louis	MO	63117	(314) 643-3076
Adm. Co.	060238	Corporate	0107	120 S Central, Ste 300	St. Louis	MO	63105	(314) 000-0000

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Account Search Display

# Enterprise Rent-A-Car

Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss

Address: file:///Y:/APPS/Ecars\_20/Development/Projects/HTML/Open%20Ticket/Rates/Rates.htm#RateSource

Links: Customize Links Free Hotmail Windows SQLtoday - news - special report

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Dates/Rates** - Options - Go

Pickup ----- Return -----

**Units Available**

Group Branch

Unit # License Plate # Last 6 of VIN

Search

Year	Make	Model	Series	Class	License	Location
1999	Mercury	Cougar	Series L	BCAR	W13-527	Saint Louis - Lindell branch
2000	Cadillac	Catera	Series N	CCAR	X13-539	Ladue
2000	Ford	Explorer	Series R	CCAR	X22-398	Ladue
2000	Chevrolet	Impala	Series P	DCAR	Y29-238	Brentwood Blvd
2000	Chevrolet	Metro	Series B	DCAR	Y26-295	Brentwood Blvd
2000	Ford	Escort	Series V	DCAR	Y22-398	Brentwood Blvd

OK Cancel

2000 Chevrolet Impala ICAR

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Done Local intranet

Units Available pop-up box

# Enterprise Rent-A-Car

Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss

Address: file:///Y:/APPS/Ecars\_20/Development%20%20Projects/HTML/Open%20Ticket/Rates/Rates.html#RateSource

Links: Customize Links File History Windows ST Today - news - special report

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Dates/Rates** - Options - Go

- Select -

Unit Information  
Vehicle Preferences

**Rates Table**

Car Class	Daily		Weekly		Monthly		Hourly		Mileage Charge
	Rate	Mileage	Rate	Mileage	Rate	Mileage	Rate		
CCAR	9.99	250	29.99	500	99.99	2500	2.99	0.25	
ECAR	15.99	250	34.99	500	109.99	2500	3.99	0.25	
FCAR	20.99	250	39.99	500	209.99	2500	4.99	0.25	
SCAR	25.99	250	44.99	500	249.99	2500	5.99	0.25	
PCAR	30.99	250	49.99	500	309.99	2500	6.99	0.25	
LCAR	35.99	250	54.99	500	409.99	2500	7.99	0.25	

Cancel

OK Cancel

Previous Next Complete

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Keycode=44 Local intranet

Get Rates display area

# Enterprise Rent-A-Car

Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss

Address: file:///Y:/APPS/Ecars\_20/Development%20%20Projects/HTML/Open%20ticket/Rates/Rates.html#RateSource

Links: Customize Links Free Hotmail Windows STL today - news - special report

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Dates/Rates**

Class to Charge for: [ ] Get Rates

Rates

Daily		Weekly		Monthly		Hourly		Mileage Charge		No Charge	
Rate	Mileage	Rate	Mileage	Rate	Mileage	Rate	Mileage	Rate	Mileage	Rate	Mileage
15.99	150	59.99	750	179.99	1500	5.99	0.15				

**Coverages** CDW,PAI,SLP

Item	Rate	Per	Start Date	Start Time	End Date	End Time
CDW	999.99	Monthly	12/22/2002	11 15 AM	12/24/2002	12 25 PM
PAI	999.99	Weekly	12/22/2002	11 15 AM	12/25/2002	8 45 PM
SLP	112.99	Weekly	12/22/2002	4 55 PM	12/25/2002	9 00 PM
- Select -						

OK Cancel

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Leetcode=44 Local intranet

Expanded Coverages display area

## 3. Open Ticket Number

### 3.1 Behavior

This area shows the unique open ticket number that has been assigned to the newly created ticket. The ticket number is 6 alphanumeric characters long.

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If another reservation or ticket is open, its reservation/ticket number will be displayed in this area as well. The user will have the ability to have up to 3 reservations/tickets open at a time. A hyperlink will be available on the reservation/ticket numbers of the reservations that are NOT currently being displayed. For the reservation/ticket that is currently displayed, the reservation/ticket number will not have a hyperlink available. This is to allow the user to navigate between the open reservations/ticket.

## 3.2 Validation

None identified at this time.

## 3.3 Business Exceptions

If the user tries to open a 4<sup>th</sup> reservation, the system will display a message stating, "A maximum of 3 reservations/tickets may be displayed".

## 3.4 System Exceptions

None identified at this time.

## 4. Pick Up Group and Branch Area

### 4.1 Behavior

This area will be defaulted to the terminal location group and branch. A group and branch are required and it will be displayed in the header information.

### 4.2 Validation

None, it will correspond to the PeopleSoft determined values.

### 4.3 Business Exceptions

None identified at this time.

### 4.4 System Exceptions

None identified at this time.

## 5. Pick Up Date Area

### 5.1 Behavior

This area will be an alphanumeric field. It will not be formatted for presentation purposes. The user may enter delineating characters, but these will be stripped out before writing to the database. There should be a calendar function available which would allow the user to select a date from a calendar icon, or similar feature, instead of entering a value. If the user selects a date from the calendar icons, it will be displayed in the date area formatted appropriately by the locale. (As determined for all locale specific formatting.) It should initially default to the current date.

### 5.2 Validation

It will be a valid month, day and year combination.

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# Enterprise Rent-A-Car

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## 5.3 Business Exceptions

If the user enters or selects a Pick-up date which is prior to the current date, display a message "Pick-up date is prior to current date. Is this correct?"

If the user enters or selects a Pick-up date which is in the future, display a message "Pick-up date cannot be in the future."

A pick up date is required. If it is blanked out, not input or selected, display a message "Must specify a pick-up date".

## 5.4 System Exceptions

If not a valid month, day and year combination, the normal date in error message should be displayed.

## 6. Pick Up Time Area

### 6.1 Behavior

#### In locales where time is shown by AM PM designation:

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute and AM/PM designation, and a maximum of Hour Hour Minute Minute AM/PM designation. i.e. 945A, would designate 9:45 in the morning. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes **must** be two numeric values. The AM/PM designation of "A" or "P" must also be indicated. The user may enter delineating characters, but these will be removed before saving to the database.

#### In locales where time is shown by 24 hour designation:

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute, and a maximum of Hour Hour Minute Minute, i.e. 945 would designate 9:45 in the morning, 1425 would designate 2:25 in the afternoon. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes must be **two** numeric values. The user may enter delineating characters, but these will be removed before saving to the database.

It should initially default to the current time.

### 6.2 Validation

#### In locales where time is shown by AM PM designation:

Time increments can range from 1200A to 1159A and from 1200P until 1159P. If an entry is not within these two ranges display "Must specify a valid time".

#### In locales where time is shown by 24 hour designation:

Time increments can range from 0000 to 2400. If an entry is not within this range display "Must specify a valid time".

### 6.3 Business Exceptions

A pick-up time cannot be selected if there is not a pick-date selected. If this is attempted, display a message "Must specify a pick-up date".

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# Enterprise Rent-A-Car

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If the user enters or selects a Pick-up time which is prior to the current time, display a message "Pick-up time is prior to current time. Is this correct?"

A pick up time is required. If the default value is removed, display a message "Must specify a pick-up time".

It is possible to have a pick-up time in the future, but the pick-up date must be the same.

## 6.4 System Exceptions

None identified at this time.

## 7. Pick Up Time Drop Down

### 7.1 Behavior

This drop down icon will display the time in 15-minute increments. When selected, it should be positioned to the ¼ hour increment immediately preceding the current time and format according to the locale's format.

### 7.2 Validation

None identified at this time.

### 7.3 Business Exceptions

A pick-up time cannot be selected if there is not a pick-date selected. If this is attempted, display a message "Must specify a pick-up date".

A pick up time is required. If the default value is removed, display a message "Must specify a pick-up time".

If the user enters or selects a Pick-up time which is prior to the current time, display a message "Pick-up time is prior to current time. Is this correct?"

It is possible to have a pick-up time in the future, but the pick-up date must be the same.

### 7.4 System Exceptions

None identified at this time.

## 8. Start Charges if Different Button Function

### 8.1 Behavior

Selecting this function will present the user with a pop-up box showing date and time fields. Information entered in the pop-up box will be displayed under the Start Charges if Different button function.

### 8.2 Validation

See specific areas.

The ok feature will save date and time if valid.

The cancel feature will close the pop-up and not save entered information, if any.

### 8.3 Business Exceptions

See specific areas.

### 8.4 System Exceptions

None identified at this time.

## 9. Start Charges if Different Date Area

### 9.1 Behavior

This area will be an alphanumeric field. It will not be formatted for presentation purposes.

The user may enter delineating characters, but these will be stripped out before writing to the database. There should be a calendar function available which would allow the user to select a date from a calendar icon, or similar feature, instead of entering a value. If the user selects a date from the calendar icons, it will be displayed in the date area formatted appropriately by the locale. (As determined for all locale specific formatting.)

It should initially default a blank.

### 9.2 Validation

It will be a valid month, day and year combination.

### 9.3 Business Exceptions

The start charges if different date must be greater than or equal to the pick-up date, and less than or equal to the return date.

If the user enters or selects a start charges if different date which is prior to the Pick-up date, display a message "Start charges dates cannot be prior to pick-up date."

If the user enters or selects a start charges if different date which is after the return date, display a message "Start charges dates cannot be after return date."

### 9.4 System Exceptions

If not a valid month, day and year combination, the normal date in error message should be displayed.



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# Enterprise Rent-A-Car

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## 10. Start Charges if Different Time Area

### 10.1 Behavior

#### In locales where time is shown by AM PM designation:

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute and AM/PM designation, and a maximum of Hour Hour Minute Minute AM/PM designation. i.e. 945A, would designate 9:45 in the morning. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes **must** be two numeric values. The AM/PM designation of "A" or "P" must also be indicated. The user may enter delineating characters, but these will be removed before saving to the database.

#### In locales where time is shown by 24 hour designation:

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute, and a maximum of Hour Hour Minute Minute, i.e. 945 would designate 9:45 in the morning, 1425 would designate 2:25 in the afternoon. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes must be **two** numeric values. The user may enter delineating characters, but these will be removed before saving to the database.

It should initially default to blank.

### 10.2 Validation

#### In locales where time is shown by AM PM designation:

Time increments can range from 1200A to 1159A and from 1200P until 1159P. If an entry is not within these two ranges display "Must specify a valid time".

#### In locales where time is shown by 24 hour designation:

Time increments can range from 0000 to 2400. If an entry is not within this range display "Must specify a valid time".

### 10.3 Business Exceptions

A start charges if different time cannot be selected if there is not a start charges if different date. If this is attempted, display a message "Must specify a start charges if different date".

The start charges if different time must be greater than or equal to the pick-up time, if the start charges if different date is equal the pick-up date.

The start charges if different time must be less than or equal to the return time, if the start charges if different date is equal the return date.

If the start charges if different date is equal to the pick-up date and the user enters or selects a start charges if different time which is prior to the Pick-up time, display a message "Start charges time cannot be prior to pick-up time"

If the start charges if different date is equal to the return date and the user enters or selects a start charges if different time which is after the return time, display a message "Start charges time cannot be after return time"

## 10.4 System Exceptions

None identified at this time.

## 11. Start Charges if Different Time Drop Down

### 11.1 Behavior

This drop down icon will display the time in 15-minute increments. When selected, it should be positioned to the ¼ hour increment immediately preceding the current time and format according to the locale's format.

### 11.2 Validation

None identified at this time.

### 11.3 Business Exceptions

A start charges if different time cannot be selected if there is not a start charges if different date. If this is attempted, display a message "Must specify a start charges if different date".

The start charges if different time must be greater than or equal to the pick-up time, if the start charges if different date is equal the pick-up date.

The start charges if different time must be less than or equal to the return time, if the start charges if different date is equal the return date.

If the start charges if different date is equal to the pick-up date and the user enters or selects a start charges if different time which is prior to the Pick-up time, display a message "Start charges time cannot be prior to pick-up time"

If the start charges if different date is equal to the return date and the user enters or selects a start charges if different time which is after the return time, display a message "Start charges time cannot be after return time"

### 11.4 System Exceptions

None identified at this time.

## 12. Return Date Area

### 12.1 Behavior

This area will be an alphanumeric field. It will not be formatted for presentation purposes.

The user may enter delineating characters, but these will be stripped out before writing to the database. There should be a calendar function available which would allow the user to select a date from a calendar icon, or similar feature, instead of entering a value. If the

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# Enterprise Rent-A-Car

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user selects a date from the calendar icons, it will be displayed in the date area formatted appropriately by the locale. (As determined for all locale specific formatting.)  
It should default to a blank area.

## 12.2 Validation

It will be a valid month, day and year combination.

## 12.3 Business Exceptions

A return date is required.

If the user does not enter a date a message is displayed "Return date must be specified".

The return date cannot be before the pick-up date. If it is, display message "Return date must be equal to, or after Pick-up date".

## 12.4 System Exceptions

If not a valid month, day and year combination, the normal date in error message should be displayed

## 13. Return Time Area

### 13.1 Behavior

**In locales where time is shown by AM PM designation:**

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute and AM/PM designation, and a maximum of Hour Hour Minute Minute AM/PM designation. i.e. 945A, would designate 9:45 in the morning. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes **must** be two numeric values. The AM/PM designation of "A" or "P" must also be indicated. The user may enter delineating characters, but these will be removed before saving to the database.

**In locales where time is shown by 24 hour designation:**

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute, and a maximum of Hour Hour Minute Minute, i.e. 945 would designate 9:45 in the morning, 1425 would designate 2:25 in the afternoon. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes must be **two** numeric values. The user may enter delineating characters, but these will be removed before saving to the database.

This should default to a blank area.

### 13.2 Validation

**In locales where time is shown by AM PM designation:**

Time increments can range from 1200A to 1159A and from 1200P until 1159P. If an entry is not within these two ranges display "Must specify a valid time".

**In locales where time is shown by 24 hour designation:**

Time increments can range from 0000 to 2400. If an entry is not within this range display "Must specify a valid time".

## 13.3 Business Exceptions

A return time is required.

If the user does not enter a time a message is displayed "Return time must be specified".

A return time cannot be selected if there is not a return date entered or selected. If this is attempted, display a message "Must specify a return date".

If the return date is the same as the pickup date, then the return time must be later than the pickup time. If not, display a message "When pickup and return date are the same, return time must be later than pickup time".

## 13.4 System Exceptions

None identified at this time.

## 14. Return Time Drop Down

### 14.1 Behavior

This drop down icon will display the time in 15-minute increments. When selected, it should be positioned to the ¼ hour increment immediately preceding the current time and format according to the locale's format.

### 14.2 Validation

None identified at this time.

### 14.3 Business Exceptions

A return time is required.

If the user does not enter a time a message is displayed "Return time must be specified".

A return time cannot be selected if there is not a return date entered or selected. If this is attempted, display a message "Must specify a return date".

If the return date is the same as the pickup date, then the return time must be later than the pickup time. If not, display a message "When pickup and return date are the same, return time must be later than pickup time".

### 14.4 System Exceptions

None identified at this time.

## 15. Change Return Location Button Function

### 15.1 Behavior

Selecting this function will present the user with a pop-up box that will show the default group, branch (to the terminal's location) and return method drop down listings and a return location text area.

Only areas with changed information will be displayed under the Change Return Information button function. The terminal location default group and branch will NOT be displayed unless changes are made.

### 15.2 Validation

See specific areas.

There are not any required areas.

The ok feature will save selected or entered information.

The cancel feature will close the pop-up and not save entered information, if any.

### 15.3 Business Exceptions

See specific areas.

### 15.4 System Exceptions

None identified at this time.

## 16. Change Return Location Group

### 16.1 Behavior

This drop down listing will be limited to those groups that exist at any point in time. The selection of "All" is NOT included in the list. The users would also like to have the ability to type a character, alpha or numeric, into the criteria area and have the drop down list position to the character. (If the user enters an "H" the drop down list would position to the first string beginning with "H" in the list)

This should default to the terminal location group.

### 16.2 Validation

The items appearing in the list are static; the user cannot add items to the list dynamically.

### 16.3 Business Exceptions

None identified at this time.

### 16.4 System Exceptions

None identified at this time.

## 17. Change Return Location Branch

### 17.1 Behavior

This drop down listing will be limited to those branches that exist within the group at any point in time. The selection of "All" is NOT included in this selection list. The users would also like to have the ability to type a character, alpha or numeric, into the criteria area and have the drop down list position to the character. (If the user enters an "H" the drop down list would position to the first string beginning with

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“H” in the list)

Branch items appearing in the list will be limited to the Group item selected. Once the selected Group item has changed, the branch will be set to blanks. This will require the user to select a branch, at which time the display area will be refreshed, repopulated and repositioned.

This will default to the terminal location branch.

## 17.2 Validation

The items appearing in the list are static; the user cannot add items to the list dynamically. This list will be limited to the branches associated with the group selected.

## 17.3 Business Exceptions

None identified at this time.

## 17.4 System Exceptions

None identified at this time.

## 18. Change Return Location Method

### 18.1 Behavior

This drop down listing will be limited to values associated with the return method, currently the valid values are: Branch, Drop and Ride Back in North America and Branch, Ride Back and Automatic Pickup (APU) in Europe.

### 18.2 Validation

The items appearing in the list are static; the user cannot add items to the list dynamically.

### 18.3 Business Exceptions

None identified at this time.

### 18.4 System Exceptions

None identified at this time.

## 19. Change Return Location Text Area

### 19.1 Behavior

This will be a free form text area.

### 19.2 Validation

None identified at this time.

### 19.3 Business Exceptions

None identified at this time.

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## 19.4 System Exceptions

None identified at this time.

## 20. Account Name Drop Down

### 20.1 Behavior

This area will be a drop down list of the Branch's short list, for North America. For everywhere else it will be the Group's Account list. If there are any of the following associated with the particular open ticket, they will appear at the top or beginning of the list in the following order.

- 1) Any Bill-To Accounts
- 2) Any Referral Accounts
- 3) Any Shop Accounts

The information displayed about an Account will be in the following order:

- 1) Account Name
- 2) Account Number
- 3) Rental Type
- 4) Owning Group/Branch
- 5) Address
- 6) City
- 7) State
- 8) Zip
- 9) Telephone

The Account Name in the display area will have a hyper-link which, when selected, will populate the Account Name, Account Number, Account Type and Rate Plan areas on the Dates and Rates panel.

### 20.2 Validation

None identified at this time.

### 20.3 Business Exceptions

If Account name or number is selected and the following account types are determined, then other areas will be defaulted to the values shown.

### 20.4 System Exceptions

None identified at this time.

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## 21. Account Number Area

### 21.1 Behavior

This area will allow entry of alphanumeric values. When there is a match, the system will populate the Account Name, Account Number, Account Type and Rate Plan areas on the Dates and Rates panel. The search will be executed as the user tabs off of the field.

### 21.2 Validation

None identified at this time.

### 21.3 Business Exceptions

If there is not an exact match, then display a message "Account number does not exist."

### 21.4 System Exceptions

None identified at this time.

## 22. Account Search Button

### 22.1 Behavior

Selecting this button will display the account search panel. See Referral Source Supplementary Specification for details.

### 22.2 Validation

None identified at this time.

### 22.3 Business Exceptions

None identified at this time.

### 22.4 System Exceptions

None identified at this time.

## 23. Rate Plan Drop Down

### 23.1 Behavior

This area will be populated when an Account Name or Account Number has been selected. If there are multiple plans associated with an Account, it will list all of the rate plans associated with that Account, and the user must choose one. When there are multiple rate plans, the value "select" will appear in area so the user knows that there are multiple rate plans and selection of a single one is required.

If there is only a single rate plan associated with an Account then the rate plan pop-up box will appear show all of the car classes and rates associated with that account.

### 23.2 Validation

None identified at this time.



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## 23.3 Business Exceptions

If no rate plans are associated with an Account then a message is displayed "No rates were found".

## 23.4 System Exceptions

None identified at this time.

## 24. Rental Type Drop Down

### 24.1 Behavior

This area will be a drop down list of Rental types.

#### Rental Type

Insurance  
Bodyshop  
Dealership  
Retail  
Corporate  
Other  
Employee  
Government  
Fleet  
Truck  
Rideshare  
Walk-in

### 24.2 Validation

Any value selected is valid.

### 24.3 Business Exceptions

None identified at this time.

### 24.4 System Exceptions

None identified at this time.

## 25. Billing Cycle Drop Down

### 25.1 Behavior

This area will initially default to the billing cycle associated with the Account and Rate Plan selected. It may be changed to another value.

Drop down domain values are Blank, 24 Hour and Calendar Day.

### 25.2 Validation

None identified at this time.

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## 25.3 Business Exceptions

See list in account name area for defaults, based on account.

## 25.4 System Exceptions

None identified at this time

## 26. Car Class to Charge for Drop Down

### 26.1 Behavior

This area will be a drop down list that also allows entry of alphanumeric values. The drop down list will be comprised of the most commonly used car classes. The entry of alphanumeric values will be edited against a larger more comprehensive car class list. If there is a successful vehicle/unit search, this will be populated with that particular vehicle's car class. It is possible to change this value.

Drop down list values

#### Class and Type

ECAR  
CCAR  
ICAR  
SCAR  
FCAR  
PCAR  
LCAR  
MVAR  
XFAR  
XPAR  
XXAR  
XVAR

### 26.2 Validation

None identified at this time.

### 26.3 Business Exceptions

If the values entered are not one of the ones listed below, a message is displayed "Must enter a valid car class".

Car Class Edit List of Values

#### Class and Type

MCAR  
MBAR  
MDAR

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# Enterprise Rent-A-Car

---

MXAR  
MSAR  
MTAR  
MWAR  
MVAR  
MFAR  
MPAR  
ECAR  
EBAR  
EDAR  
EXAR  
ESAR  
ETAR  
EWAR  
EVAR  
EFAR  
EPAR  
CCAR  
CBAR  
CDAR  
CXAR  
CSAR  
CTAR  
CWAR  
CVAR  
CFAR  
CPAR  
ICAR  
IBAR  
IDAR  
IXAR  
ISAR  
ITAR  
IWAR  
IVAR  
IFAR  
IPAR  
SCAR  
SBAR  
SDAR  
SXAR  
SSAR  
STAR

---

# Enterprise Rent-A-Car

---

SWAR  
SVAR  
SFAR  
SPAR  
FCAR  
FBAR  
FDAR  
FXAR  
FSAR  
FTAR  
FWAR  
FVAR  
FFAR  
FPAR  
PCAR  
PBAR  
PDAR  
PXAR  
PSAR  
PTAR  
PWAR  
PVAR  
PFAR  
PPAR  
LCAR  
LBAR  
LDAR  
LXAR  
LSAR  
LTAR  
LWAR  
LVAR  
LFAR  
LPAR  
XCAR  
XBAR  
XDAR  
XXAR  
XSAR  
XTAR  
XWAR  
XVAR  
XFAR

## XPAR

### 26.4 System Exceptions

None identified at this time.

## 27. Unit/Vehicle Input Search Area

### 27.1 Behavior

This will be an alphanumeric input area, consisting of 3 areas. The Unit Number, the License Number and the last 6 Digits of the Vehicle Identification Number, (VIN).

The Unit Number must be entered, with at least one of the other two. Using this information, the system will be able to determine the associated car class, for the rate source selected.

If there is only a single rate plan associated with the car class and rate source then the system will return rates for that particular unit/vehicle and the rates associated with all applicable coverages, PAI, CDW and SLP.

If there is more than one rate plan associated with the rate source, then the system will display all rate plans determined by the car class and allow the user to select a single rate plan. After a single rate plan is selected, then the system will return rates for that particular unit/vehicle and the rates associated with all applicable coverages, PAI, CDW and SLP.

At a minimum, we will need to return the associated Unit Number, Year, Make, Model and Car Class of the different vehicles. This information will need to be saved with the transaction also. It will also be displayed within the unit information box when retrieved. The search will initiate when the user tabs off of the last field.

### 27.2 Validation

None identified at this time.

### 27.3 Business Exceptions

If the unit/vehicle selected belong to a car class, which is not associated with a rate plan for the designated rate source, then a message is displayed "Rate plan does not contain selected car class".

If the user has not entered one of the required fields, display a message "Unit number and license plate number or last 6 of VIN required."

### 27.4 System Exceptions

None identified at this time.

At a minimum, we will need to return the associated Unit Number, Year, Make, Model and Car Class of the different vehicles. This information will need to be saved with the transaction also.

## **28. Units Available Search Button Function**

### **28.1 Behavior**

Selecting this button will display the Units available search pop-up panel.

The pop-up box will display:

Group and branch drop down boxes.

Unit number, License plate number and Last 6 of VIN input areas.

A search function which will execute the search

A display of the vehicles available table with columns:

Year, Make, Model, Series, Car Class, License Plate Number and Location.

The Group and Branch drop down boxes will default to the terminal location.

The Unit Number, License Plate Number and Last 6 of VIN, will default to blank. Any one, two or all three may be used to search the Vehicle Data base.

The vehicles available display will default display the available units at the terminal location default group and branch.

### **28.2 Validation**

None identified at this time.

### **28.3 Business Exceptions**

There must be at least one search criteria to execute a search, otherwise display a message "Must specify at least one search criteria".

### **28.4 System Exceptions**

None identified at this time.

## **29. Get Rates Button**

### **29.1 Behavior**

Selection of this button will have the system execute a search for rate plans associated with the information entered.

### **29.2 Validation**

None identified at this time.

### **29.3 Business Exceptions**

At a minimum there must be an Account Name or an Account Number to search for rates. If the user selects this button without one of these a message is displayed "Must specify account name or number".

### **29.4 System Exceptions**

None identified at this time.

## 30. Rate Plan – Pop-Up Display Area

### 30.1 Behavior

This is a pop-up window that will display the rates of a rate plan associated with an Account. Information displayed is:

Rate pop-up box columns and information:

- Car Class
- Daily – Rate and Mileage
- Weekly – Rate and Mileage
- Monthly – Rate and Mileage
- Hourly - Rate
- Mileage Charge

Car class will have a hyper-link which will allow the user to select the rate they want. This will then populate the rates display area on the Dates and Rates panel.

### 30.2 Validation

None identified at this time.

### 30.3 Business Exceptions

If an Account has more than one rate plan associated with it, then this information cannot be displayed until the Rate Plan area has a value.

If an Account has a single rate plan associated with it, then this information is displayed after the Account Name is selected or an Account Number is entered.

If an Account has a single rate plan and there is a value in the Car Class area, and that car class is in the rate plan, then the rates display area of the Dates and Rates panel is populated with the appropriate information and the rate plan pop-up window is NOT displayed.

If an Account has multiple rate plans and there is a value in the Car Class area, and there is not a value in Rate Plan area, a message should display “Must specify a rate plan”.

If an Account has a multiple rate plans, and there is a value in the Rate Plan area and there is a value in the Car Class area, and that car class is in the rate plan, then the rates display area of the Dates and Rates panel is populated with the appropriate information and the rate plan pop-up window is NOT displayed.

If an Account has a single rate plans, and there is a value in the Car Class area, but that car class is not in the rate plan, then a message is displayed, “Rate plan does not contain selected car class”.

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If an Account has a multiple rate plans, and there is a value in the Rate Plan area and there is a value in the Car Class area, but that car class is not in the rate plan, then a message is displayed "No rates found for car class selected".

## 30.4 System Exceptions

None identified at this time

## 31. Rate Plan – Display Area

### 31.1 Behavior

This is a display area that will be populated with the rates associated with a particular car class of a rate plan associated with an Account.

Information displayed is:

- Car Class
- Daily Rate
- Daily Mileage
- Weekly Rate
- Weekly Mileage
- Monthly Rate
- Monthly Mileage
- Hourly Rate
- Mileage Charge
- No Charge Check Box

All of the information presented, except Car Class, has the ability to be edited or changed.

There is an interaction between the Mileage Charge and the No Charge Check Box. If the No Charge Check Box is selected, then the Mileage Charge is set to zero and the area disabled. Unselecting the No Charge Check Box will enable the Mile Charge area for entering values.

### 31.2 Validation

None identified at this time.

### 31.3 Business Exceptions

Negative values may not be entered. If attempted, display message "Must specify positive amount".

### 31.4 System Exceptions

None identified at this time



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# Enterprise Rent-A-Car

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## 32. Coverages Area

### 32.1 Behavior

This will be a collapsible/expandable area to display the different coverages. There will be some sort of button functionality which will allow this area to be expanded or collapsed. In either state the selected coverages will be listed to the side of the button function. Values within area may be changed or edited.

Each area will have a drop-down box to be able to select additional items.

It is anticipated that the information to be displayed for each instance of the coverage is:

- Description
- Rate
- Rate Frequency
- Start Date
- Start Time
- End Date
- End Time

All of this information will come from what is maintained in the Perot systems.

### 32.2 Validation

None identified at this time.

### 32.3 Business Exceptions

Negative values may not be entered in the rate area. If attempted, display message "Must specify positive amount".

Dates may be changed, but cannot be beyond the Pick-up and/or Return date range. If this is attempted, display appropriate message, either "Start date cannot be before pick-up date" or "End date cannot be after return date".

Similarly, Times may be changed, but cannot be beyond the Pick-up and/or Return time range. If this is attempted, display appropriate message, either "Start time cannot be before pick-up time" or "End time cannot be after return time".

### 32.4 System Exceptions

None identified at this time.

## 33. Coverages - CDW Area

### 33.1 Behavior

This area will initially default to the amount of Collision Damage Waiver associated with the Car Class and Rate Plan for the particular Account. This area may be changed or edited.

Each area will have a drop-down box to be able to select additional items.

### 33.2 Validation

None identified at this time.

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## 33.3 Business Exceptions

Negative values may not be entered in the rate area. If attempted, display message "Must specify positive amount".

Dates may be changed, but cannot be beyond the Pick-up and/or Return date range. If this is attempted, display appropriate message, either "Start date cannot be before pick-up date" or "End date cannot be after return date".

Similarly, Times may be changed, but cannot be beyond the Pick-up and/or Return time range. If this is attempted, display appropriate message, either "Start time cannot be before pick-up time" or "End time cannot be after return time".

## 33.4 System Exceptions

None identified at this time

## 34. Coverages - PAI Area

### 34.1 Behavior

This area will initially default to the amount of Personal Accident Insurance associated with the Car Class and Rate Plan for the particular Account. This area may be changed or edited. Each area will have a drop-down box to be able to select additional items.

### 34.2 Validation

None identified at this time.

### 34.3 Business Exceptions

Negative values may not be entered in the rate area. If attempted, display message "Must specify positive amount".

Dates may be changed, but cannot be beyond the Pick-up and/or Return date range. If this is attempted, display appropriate message, either "Start date cannot be before pick-up date" or "End date cannot be after return date".

Similarly, Times may be changed, but cannot be beyond the Pick-up and/or Return time range. If this is attempted, display appropriate message, either "Start time cannot be before pick-up time" or "End time cannot be after return time".

### 34.4 System Exceptions

None identified at this time

## 35. Coverages - SLP Area

### 35.1 Behavior

This area will initially default to the amount of Supplemental Liability Protection associated with the Car Class and Rate Plan for the particular Account. This area may be changed or edited. Each area will have a drop-down box to be able to select additional items.

### 35.2 Validation

None identified at this time.

## 35.3 Business Exceptions

Negative values may not be entered in the rate area. If attempted, display message "Must specify positive amount".

Dates may be changed, but cannot be beyond the Pick-up and/or Return date range. If this is attempted, display appropriate message, either "Start date cannot be before pick-up date" or "End date cannot be after return date".

Similarly, Times may be changed, but cannot be beyond the Pick-up and/or Return time range. If this is attempted, display appropriate message, either "Start time cannot be before pick-up time" or "End time cannot be after return time".

## 35.4 System Exceptions

None identified at this time.

## 36. Cancel Function Button

### 36.1 Behavior

The Cancel image/button will take the user to the last panel accessed.

### 36.2 Validation

None identified at this time.

### 36.3 Business Exceptions

None identified at this time.

### 36.4 System Exceptions

None identified at this time.

## General Requirements

### 37. Error Message - Session Already Exists for this Browser Instance

This captures the Error Message generated when the user attempts to open a new session on the terminal without opening a new instance of the IE browser.

#### 37.1 Behavior

When the user attempts to open a new session on the same terminal without opening a new instance of the browser, display the following error message:

"There is a session already open for this browser on this terminal.  
Please use that session or open a new browser."

For Informational purposes: This situation can occur when the user attempts to open the active session by selecting the window titled "About" and uses the "back" button to navigate to the previous page.

## 38. Security

DATE	DESCRIPTION	AMOUNT	BALANCE
1900	Jan 1		100.00
	Feb 1	50.00	150.00
	Mar 1	25.00	175.00
	Apr 1	75.00	250.00
	May 1	100.00	350.00
	Jun 1	150.00	500.00
	Jul 1	200.00	700.00
	Aug 1	250.00	950.00
	Sep 1	300.00	1250.00
	Oct 1	350.00	1600.00
	Nov 1	400.00	2000.00
	Dec 1	450.00	2450.00
1901	Jan 1	500.00	2950.00
	Feb 1	550.00	3500.00
	Mar 1	600.00	4100.00
	Apr 1	650.00	4750.00
	May 1	700.00	5450.00
	Jun 1	750.00	6200.00
	Jul 1	800.00	7000.00
	Aug 1	850.00	7850.00
	Sep 1	900.00	8750.00
	Oct 1	950.00	9700.00
	Nov 1	1000.00	10700.00
	Dec 1	1050.00	11750.00
1902	Jan 1	1100.00	12850.00
	Feb 1	1150.00	14000.00
	Mar 1	1200.00	15200.00
	Apr 1	1250.00	16450.00
	May 1	1300.00	17750.00
	Jun 1	1350.00	19100.00
	Jul 1	1400.00	20500.00
	Aug 1	1450.00	21950.00
	Sep 1	1500.00	23450.00
	Oct 1	1550.00	25000.00
	Nov 1	1600.00	26600.00
	Dec 1	1650.00	28250.00
1903	Jan 1	1700.00	29950.00
	Feb 1	1750.00	31700.00
	Mar 1	1800.00	33500.00
	Apr 1	1850.00	35350.00
	May 1	1900.00	37250.00
	Jun 1	1950.00	39200.00
	Jul 1	2000.00	41200.00
	Aug 1	2050.00	43250.00
	Sep 1	2100.00	45350.00
	Oct 1	2150.00	47500.00
	Nov 1	2200.00	49700.00
	Dec 1	2250.00	51950.00
1904	Jan 1	2300.00	54250.00
	Feb 1	2350.00	56600.00
	Mar 1	2400.00	59000.00
	Apr 1	2450.00	61450.00
	May 1	2500.00	63950.00
	Jun 1	2550.00	66500.00
	Jul 1	2600.00	69100.00
	Aug 1	2650.00	71750.00
	Sep 1	2700.00	74450.00
	Oct 1	2750.00	77200.00
	Nov 1	2800.00	80000.00
	Dec 1	2850.00	82850.00
1905	Jan 1	2900.00	85750.00
	Feb 1	2950.00	88700.00
	Mar 1	3000.00	91700.00
	Apr 1	3050.00	94750.00
	May 1	3100.00	97850.00
	Jun 1	3150.00	101000.00
	Jul 1	3200.00	104200.00
	Aug 1	3250.00	107450.00
	Sep 1	3300.00	110750.00
	Oct 1	3350.00	114100.00
	Nov 1	3400.00	117500.00
	Dec 1	3450.00	120950.00
1906	Jan 1	3500.00	124450.00
	Feb 1	3550.00	128000.00
	Mar 1	3600.00	131600.00
	Apr 1	3650.00	135250.00
	May 1	3700.00	138950.00
	Jun 1	3750.00	142700.00
	Jul 1	3800.00	146500.00
	Aug 1	3850.00	150350.00
	Sep 1	3900.00	154250.00
	Oct 1	3950.00	158200.00
	Nov 1	4000.00	162200.00
	Dec 1	4050.00	166250.00
1907	Jan 1</		

## Rental Redesign/ECARS 2.0

### Screen Action Specification: Vehicle / Shop

Year	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	

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## Revision History

Date	Version	Description	Author
08/03/2001	1.0	Created document	Chris Carr
08/07/2001	1.1	Updated document with revised screen shots and verbiage	Chris Carr
08/10/2001	1.2	Updated document to reflect Use Case changes	Chris Carr
08/13/2001	1.3	Clarification of Contact Last Name and/or Contact First Name. Added info relating to System generated Notes.	Chris Carr
08/14/2001	1.4	Added info for European Branch Short list	Chris Carr
08/16/2001	1.5	<ul style="list-style-type: none"> <li>Changed text in 4.5.1 to "... Account's phone number."</li> <li>Changed text in 4.5.2 to "Entered data should be 10 digits for US to include area code or appropriate format for other countries."</li> <li>Phone number is pre-populated with value from selected Account.</li> <li>Changing Account name will update the Account number and vice versa.</li> <li>When "Theft" is selected, Theft Waiver Days (3.14) is no longer a required field.</li> <li>If a value other than (Blank) is selected for Theft Waiver Days (3.14), the Date of Loss (3.12) field is then required.</li> </ul>	Chris Carr
08/20/2001	1.6	Renamed document to Vehicle/Shop.	Chris Carr
08/24/2001	1.7	Added Country code to Not on File.	Chris Carr
08/30/2001	1.8	<ul style="list-style-type: none"> <li>Added screen shots for the United Kingdom, Ireland and Germany versions.</li> <li>Added screen shot for Germany's Schwakeliste.</li> <li>Made changes to the order of text descriptions of the fields to reflect the new order presented in the screen shots of the Vehicle/Shop screen.</li> <li>License Plate Number will no longer be displayed for North America.</li> <li>License Plate Number will be displayed as Registration Number for all of the European countries.</li> <li>Removed the requirement of Date of Loss if a Theft Waiver Days value is selected.</li> </ul>	Chris Carr

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		<ul style="list-style-type: none"> <li>Removed the "and/or" requirement for Contact Last Name and Contact First Name. Only the Last Name is now required.</li> <li>Added a new section for the text description of the Schwakeliste fields.</li> </ul>	
09/04/2001	1.9	<ul style="list-style-type: none"> <li>Year will not be displayed for Ireland.</li> <li>Schwakeliste pop-up is no longer required.</li> <li>System note needs to be generated for registration number and class.</li> </ul>	Chris Carr
09/06/2001	2.0	Put in changes for Class now being a drop down selection field.	Chris Carr
09/06/2001	2.1	Updated with changes from Reservation	James Atteberry
09/12/2001	2.2	Updated with new screen shots containing new navigation areas.	Chris Carr
09/21/2001	2.3	<ul style="list-style-type: none"> <li>Expanded sys-gen note for Vehicle Year/Make/Model changed to 3 separate notes.</li> <li>Reinstated the "and/or" requirement for Contact Last Name and First Name.</li> </ul>	Chris Carr
10/12/2001	2.4	Updated with new screen shots.	Chris Carr
10/23/2001	2.5	<ul style="list-style-type: none"> <li>Updated with new screen shots and verbiage that reflect the change of the "Add Contact" button to now say "New Contact".</li> <li>Changed system notes for "Not on File" to reflect what was developed.</li> </ul>	Chris Carr
10/30/2001	2.6	Added verbiage stating that blanking out the Account name/number will then cause the Account number/name and Contact to also be blanked out.	Chris Carr
11/13/2001	2.7	<ul style="list-style-type: none"> <li>Changed theft waiver days from "One Day", "Two Days", "Three Days" to "1 Day", "2 Days" and "3 Days".</li> <li>Added system generated notes for Other Make and Other Model.</li> </ul>	Chris Carr

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## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Vehicle / Shop screen.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Screen Prints

The screenshot displays the 'Vehicle / Shop' interface within a Microsoft Internet Explorer browser window. The browser's title bar reads 'Vehicle / Shop - Microsoft Internet Explorer provided by Enterprise Rent-a-Car'. The address bar shows the local file path: 'Y:\APPS\Ecars\_20\Development\Projects\HTML\Open Ticket\Shop\RentersVehicle&Shop.html'. The page features a navigation bar with tabs for 'Reservation', 'Contracts', and 'Callbacks'. The main content area is titled 'Renter's Vehicle' and includes a sidebar on the left with sections: 'DRIVERS' (Driver summary 1, Driver summary 2), 'REFERRAL' (Referral sum 1, Referral sum 2), 'DATES/RATES' (Dates summary 1, Dates summary 2), 'BILL-TO' (Bill-To summary 1, Bill-To summary 2), 'VEHICLE/SHOP' (Vehicle/Shop 1, Vehicle/Shop 2), and 'NOTES' (Notes summary 1, Notes summary 2). The 'VEHICLE/SHOP' section is currently active. The main form area contains several input fields and buttons. The 'Vehicle' section includes fields for Year, Make, Model, Color, and corresponding 'Other' options. The 'Loss Information' section includes fields for Is Car, Drivable?, Total Loss?, Date of Loss, and Theft Waiver Days. The 'Shop' section includes fields for Account Name, Account Number, Contact Name, and Phone Number, along with buttons for 'Account Search', 'New Contact', and 'Not on File'. At the bottom of the form are buttons for 'Previous', 'Next', and 'Complete'. The status bar at the very bottom shows 'Res - 411781 Tkt - 234567 Cbk - 363221'.

Figure 1 – Vehicle / Shop (North America)

Rental Redesign	Version: 2.7
Screen Action Specification	Date: 12/20/2001
Vehicle / Shop	

Vehicle / Shop - Ireland and United Kingdom - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Address Y:\APPS\Ecars\_20\Development Projects\HTML\Open Ticket\Shop\Vehicle&Shop-IrelandUK.html

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Renter's Vehicle** - Options - Go

Vehicle

Registration Number

Make Other Make

Model Other Model

Color Other Color

Loss Information

Is Car Drivable? Type of Loss

Total Loss? Date of Loss

Vehicle Notes

**Shop**

Shop

Account Name Account Number

Contact Name

Account Search Not on File

Phone Number

New Contact

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

Done Local Intranet

Figure 2 – Vehicle / Shop (Ireland & United Kingdom)

Rental Redesign	Version: 2.7
Screen Action Specification	Date: 12/20/2001
Vehicle / Shop	

Vehicle / Shop - Germany - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Address Y:\APPS\Ecars\_20\Development Projects\HTML\Open Ticket\Shop\Vehicle&Shop-Germany.html

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1

Driver summary 2

**REFERRAL**

Referral sum 1

Referral sum 2

**DATES/RATES**

Dates summary 1

Dates summary 2

**BILL-TO**

Bill-To summary 1

Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1

Vehicle/Shop 2

**NOTES**

Notes summary 1

Notes summary 2

**Renter's Vehicle** - Options - Go X

**Vehicle**

Registration Number

Year Class

Make Other Make

Model Other Model

Color Other Color

**Loss Information**

Is Car Drivable? Type of Loss

Total Loss? Date of Loss

**Vehicle Notes**

**Shop**

Shop

Account Name Account Number

Contact Name Phone Number

Account Search Not on File

New Contact

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

Done Local intranet

Figure 3 – Vehicle / Shop (Germany)

Rental Redesign	Version: 2.7
Screen Action Specification	Date: 12/20/2001
Vehicle / Shop	

Vehicle / Shop - Germany - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Address Y:\APPS\Ecars\_20\Development Projects\HTML\Open Ticket\Shop\Vehicle&Shop-Germany.html

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Renter's Vehicle**

Vehicle  
Registration Number  
Year  
Make  
Model  
Color

**Shop**

Shop  
Account Name  
Contact Name

**Not on File**

Name\*  
Address\*  
Zip\*  
City\*  
Phone Number\*  
Contact Last Name  
Contact First Name

Country\* Germany  
State\*

Type of Loss  
Rate of Loss

Not on File

OK Cancel Complete

Previous Next

Res - 411781 Tkt - 234567 Cbk - 363221

keycode=18 Local intranet

Figure 4 – Add Account Not on File

Rental Redesign	Version: 2.7
Screen Action Specification	Date: 12/20/2001
Vehicle / Shop	

Vehicle / Shop - Germany - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Address Y:\APPS\Ecars\_20\Development Projects\HTML\Open Ticket\Shop\Vehicle&Shop-Germany.html

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Renter's Vehicle** - Options - Go

**Vehicle**

Registration Number  
Year  
Class  
Make  
Other Make  
Model  
Other Model  
Color

**Loss Information**

Is Car Drivable?  
Type of Loss  
Total Loss?  
Date of Loss

**Shop**

Shop  
Account Name  
Contact Name

**New Contact**

Last Name:  
First Name:  
Not on File  
OK Cancel  
New Contact

Previous Next Complete

Res - 411701 Tkt - 234567 Cbk - 363221

keycode=9 Local intranet

Figure 5 – New Contact

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Screen Action Specification	Date: 12/20/2001
Vehicle / Shop	

### 3. Vehicle / Shop (Figure 1, Figure 2, Figure 3)

#### 3.1 Registration Number (Vehicle area of Renter's Vehicle sub-screen)

##### 3.1.1 Behavior

This is a text field in which the user may enter a Registration Number. This field only appears on the European versions (Figure 2, Figure 3) of the application and is hidden on the North American version (Figure 1).

##### 3.1.2 Validation

No validation is necessary.

##### 3.1.3 Business Exceptions

None have been identified at this time.

##### 3.1.4 System Exceptions

None have been identified at this time.

#### 3.2 Year (Vehicle area of Renter's Vehicle sub-screen)

##### 3.2.1 Behavior

This is a drop-down field containing the Years available for searching. This field is hidden on the Ireland and United Kingdom version (Figure 2) of the application and is visible on the North American and German versions (Figure 1, Figure 3).

##### 3.2.2 Validation

No validation is necessary.

##### 3.2.3 Business Exceptions

None have been identified at this time.

##### 3.2.4 System Exceptions

None have been identified at this time.

#### 3.3 Class (Vehicle area of Renter's Vehicle sub-screen)

##### 3.3.1 Behavior

This is a drop-down field containing a list of numbers from 1 to 10 for the User to select as the Class. This field only appears on the German version (Figure 3) of the application and is hidden on the North American and the Ireland and United Kingdom versions (Figure 1, Figure 2).

##### 3.3.2 Validation

No validation is necessary.

##### 3.3.3 Business Exceptions

None have been identified at this time.

##### 3.3.4 System Exceptions

None have been identified at this time.

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Vehicle / Shop	

### **3.4 Make (Vehicle area of Renter's Vehicle sub-screen)**

#### **3.4.1 Behavior**

This is a drop-down field containing a list of makes available for the Year (3.2) selected. If a Make different from "Other Make" is selected from the list, the Other Make (3.5) field should be cleared out. This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.4.2 Validation**

No validation is necessary.

#### **3.4.3 Business Exceptions**

None have been identified at this time.

#### **3.4.4 System Exceptions**

None have been identified at this time.

### **3.5 Other Make (Vehicle area of Renter's Vehicle sub-screen)**

#### **3.5.1 Behavior**

This is a text field in which the user may enter a Make that was not available in the drop-down. If a value is entered, the Make (3.4) drop-down field should be cleared out if it has a value different from "Other Make". This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.5.2 Validation**

No validation is necessary.

#### **3.5.3 Business Exceptions**

None have been identified at this time.

#### **3.5.4 System Exceptions**

None have been identified at this time.

### **3.6 Model (Vehicle area of Renter's Vehicle sub-screen)**

#### **3.6.1 Behavior**

This is a drop-down field containing a list of models available for the Make (3.4) selected. If a Model different from "Other Model" is selected from the list, the Other Model (3.7) field should be cleared out. This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.6.2 Validation**

No validation is necessary.

#### **3.6.3 Business Exceptions**

None have been identified at this time.

#### **3.6.4 System Exceptions**

None have been identified at this time.



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Vehicle / Shop	

### **3.7 Other Model (Vehicle area of Renter's Vehicle sub-screen)**

#### **3.7.1 Behavior**

This is a text field in which the user may enter a Model that was not available in the drop-down. If a value is entered, the Model (3.6) drop-down field should be cleared out if it has a value different from "Other Model". This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.7.2 Validation**

No validation is necessary.

#### **3.7.3 Business Exceptions**

None have been identified at this time.

#### **3.7.4 System Exceptions**

None have been identified at this time.

### **3.8 Color (Vehicle area of Renter's Vehicle sub-screen)**

#### **3.8.1 Behavior**

This is a drop-down field containing a list of available colors. If a Color different from "Other Color" is selected from the list, the Other Color (3.9) field should be cleared out. This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.8.2 Validation**

No validation is necessary.

#### **3.8.3 Business Exceptions**

None have been identified at this time.

#### **3.8.4 System Exceptions**

None have been identified at this time.

### **3.9 Other Color (Vehicle area of Renter's Vehicle sub-screen)**

#### **3.9.1 Behavior**

This is a text field in which the user may enter a Color that was not available in the drop-down. If a value is entered, the Color (3.8) drop-down field should be cleared out if it has a value different from "Other Color". This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.9.2 Validation**

No validation is necessary.

#### **3.9.3 Business Exceptions**

None have been identified at this time.

#### **3.9.4 System Exceptions**

None have been identified at this time.

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### **3.10 Is Car Drivable? (Loss Information area of Renter's Vehicle sub-screen)**

#### **3.10.1 Behavior**

This is a drop down field containing the following domain values:

- (Blank) - Default
- Yes
- No

This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.10.2 Validation**

No validation is necessary.

#### **3.10.3 Business Exceptions**

None have been identified at this time.

#### **3.10.4 System Exceptions**

None have been identified at this time.

### **3.11 Type of Loss? (Loss Information area of Renter's Vehicle sub-screen)**

#### **3.11.1 Behavior**

This is a drop down field containing the following domain values:

- (Blank) - Default
- Damage
- Theft

This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.11.2 Validation**

No validation is necessary.

#### **3.11.3 Business Exceptions**

None have been identified at this time.

#### **3.11.4 System Exceptions**

None have been identified at this time.

### **3.12 Total Loss? (Loss Information area of Renter's Vehicle sub-screen)**

#### **3.12.1 Behavior**

This is a drop down field containing the following domain values:

- (Blank) - Default
- Yes
- No

This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.12.2 Validation**

No validation is necessary.

#### **3.12.3 Business Exceptions**

None have been identified at this time.

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#### 3.12.4 *System Exceptions*

None have been identified at this time.

### 3.13 **Date of Loss (Loss Information area of Renter's Vehicle sub-screen)**

#### 3.13.1 *Behavior*

This is a text field in which the user may enter a date value. This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### 3.13.2 *Validation*

Entered data should be in a MM/DD/YYYY format.

#### 3.13.3 *Business Exceptions*

None have been identified at this time.

#### 3.13.4 *System Exceptions*

None have been identified at this time.

### 3.14 **Calendar button (Loss Information area of Renter's Vehicle sub-screen)**

#### 3.14.1 *Behavior*

This will bring up a calendar pop-up window allowing the user to select a specific date. The selected date will fill the Date of Loss (3.13) field. This button appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### 3.14.2 *Validation*

No validation is necessary.

#### 3.14.3 *Business Exceptions*

None have been identified at this time.

#### 3.14.4 *System Exceptions*

None have been identified at this time.

### 3.15 **Theft Waiver Days (Loss Information area of Renter's Vehicle sub-screen)**

#### 3.15.1 *Behavior*

This is a drop down field containing the following domain values:

- (Blank) - Default
- 1 Day
- 2 Days
- 3 Days

This field only appears on the North American version (Figure 1) of the application and is hidden on the European versions (Figure 2, Figure 3).

#### 3.15.2 *Validation*

No validation is necessary.

#### 3.15.3 *Business Exceptions*

None have been identified at this time.

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#### 3.15.4 System Exceptions

None have been identified at this time.

### 3.16 Vehicle Notes (Renter's Vehicle sub-screen)

#### 3.16.1 Behavior

This is a free form text field in which the user may enter data. The information entered here is only visible from this screen. This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### 3.16.2 Validation

No validation is necessary.

#### 3.16.3 Business Exceptions

None have been identified at this time.

#### 3.16.4 System Exceptions

None have been identified at this time.

### 3.17 Account Name (Shop sub-screen)

#### 3.17.1 Behavior

This field's value is entered when:

- User enters the Account name.
- User clicks the "down arrow" button (3.18) to the immediate right and selects an Account from the Branch Short list.
- User enters a valid number in the Account Number (3.19) field. That number's Account name value will then populate this field.
- User clicks the "Search" button (3.20) and selects an Account from the Account Information list.
- User clicks the "Not on File" button (3.21) and enters the appropriate new Account information.

If an Account name is entered, the Account Number (3.19), Contact Name (3.22) and Phone Number (3.25) fields will then be populated. If the Account name is blanked out and the user tabs off or leaves the field, Account Number (3.19) and Contact (3.22) will also be blanked out. This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### 3.17.2 Validation

No validation is necessary.

#### 3.17.3 Business Exceptions

None have been identified at this time.

#### 3.17.4 System Exceptions

None have been identified at this time.

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### **3.18 Down arrow button (Shop sub-screen)**

#### **3.18.1 Behavior**

This will bring up the Branch Short list allowing the user to select a specific Account. If in Europe, the European Branch Short list will be brought up. If an Account is selected, the Account Name (3.17), Account Number (3.19), Contact Name (3.22) and Phone Number (3.25) fields will then be populated. This button appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.18.2 Validation**

No validation is necessary.

#### **3.18.3 Business Exceptions**

None have been identified at this time.

#### **3.18.4 System Exceptions**

None have been identified at this time.

### **3.19 Account Number (Shop sub-screen)**

#### **3.19.1 Behavior**

This field's value is entered when:

- User enters a valid name in the Account Name (3.17) field. That name's Account number value will then populate this field.
- User clicks the "down arrow" button (3.18) to the immediate left and selects an Account from the Branch Short list.
- User enters the Account number.
- User clicks the "Search" button (3.20) and selects an Account from the Account Information list.
- User clicks the "Not on File" button (3.21) and enters the appropriate new Account information.

If an Account number is entered, the Account Name (3.17), Contact Name (3.22) and Phone Number (3.25) fields will then be populated. If the Account number is blanked out and the user tabs off or leaves the field, Account Name (3.17) and Contact (3.22) will also be blanked out. This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.19.2 Validation**

No validation is necessary.

#### **3.19.3 Business Exceptions**

None have been identified at this time.

#### **3.19.4 System Exceptions**

None have been identified at this time.

### **3.20 Search button (Shop sub-screen)**

#### **3.20.1 Behavior**

This will bring up the Account Search screen allowing the user to search for and then select a specific Account. If an Account is selected, the Account Name (3.17), Account

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Number (3.19), Contact Name (3.22) and Phone Number (3.25) fields will then be populated. This button appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

### 3.20.2 Validation

No validation is necessary.

### 3.20.3 Business Exceptions

None have been identified at this time.

### 3.20.4 System Exceptions

None have been identified at this time.

## 3.21 Not on File button (Shop sub-screen)

### 3.21.1 Behavior

This will bring up the Add Account Not on File screen (Figure 4) allowing the user to enter information for a new Account. After all the necessary fields on that screen are entered, the Account Name (3.17), Account Number (3.19), Contact Name (3.22) and Phone Number (3.25) fields will then be populated with that screen's entered information. This button appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

### 3.21.2 Validation

No validation is necessary.

### 3.21.3 Business Exceptions

None have been identified at this time.

### 3.21.4 System Exceptions

None have been identified at this time.

## 3.22 Contact Name (Shop sub-screen)

### 3.22.1 Behavior

This field's value is entered when:

- User enters a valid name in the Account Name (3.17) field. That name's Contact name value will then populate this field.
- User clicks the "down arrow" button (3.18) to the immediate right of Account Name (3.17) and selects an Account from the Branch Short list. That Account's Contact name value will then populate this field's value.
- User enters a valid number in the Account Number (3.19) field. That number's Contact name value will then populate this field.
- User clicks the "Search" button (3.20) and selects an Account from the Account Information list. That Account's Contact name value will then populate this field's value.
- User clicks the "Not on File" button (3.21) and enters the appropriate new Contact information after the new Account information. After all the necessary fields on

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that screen are entered, that screen's entered information for Contact name will then populate this field's value.

- User enters the Contact name.
- User clicks the "down arrow" button (3.23) to the immediate right and selects a Contact from the Contact list.
- User clicks the "Add New" button (3.24) and enters the appropriate new Contact information.

This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

### 3.22.2 *Validation*

No validation is necessary.

### 3.22.3 *Business Exceptions*

None have been identified at this time.

### 3.22.4 *System Exceptions*

None have been identified at this time.

## 3.23 **Down arrow button (Shop sub-screen)**

### 3.23.1 *Behavior*

This will bring up the Contact list allowing the user to select a specific Contact. If a Contact is selected, the Contact Name (3.22) field will then be populated. This button appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

### 3.23.2 *Validation*

No validation is necessary.

### 3.23.3 *Business Exceptions*

None have been identified at this time.

### 3.23.4 *System Exceptions*

None have been identified at this time.

## 3.24 **New Contact button (Shop sub-screen)**

### 3.24.1 *Behavior*

This will bring up the New Contact screen (Figure 5) allowing the user to enter information for a new Contact.

After the necessary field(s) on that screen is/are entered, the Contact Name (3.22) field will then be populated with that screen's entered information. This button appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

### 3.24.2 *Validation*

No validation is necessary.

### 3.24.3 *Business Exceptions*

None have been identified at this time.

### 3.24.4 *System Exceptions*

None have been identified at this time.

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### 3.25 Phone Number (Shop sub-screen)

#### 3.25.1 Behavior

This field's value is entered when:

- User enters a valid name in the Account Name (3.17) field. That name's Phone number value will then populate this field.
- User clicks the "down arrow" button (3.18) to the immediate right of Account Name (3.17) and selects an Account from the Branch Short list. That Account's Phone number value will then populate this field's value.
- User enters a valid number in the Account Number (3.19) field. That number's Phone number value will then populate this field.
- User clicks the "Search" button (3.20) and selects an Account from the Account Information list. That Account's Phone number value will then populate this field's value.
- User clicks the "Not on File" button (3.21) and enters the appropriate new Account information. That Account's Phone number value will then populate this field's value.
- User enters the Phone number.

This button appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### 3.25.2 Validation

No validation is necessary.

#### 3.25.3 Business Exceptions

None have been identified at this time.

#### 3.25.4 System Exceptions

None have been identified at this time.

### 3.26 Button Line Area

#### 3.26.1 Behavior

The Previous button will take the user to the Bill-to screen within the same transaction.

The Next button will take the user to the Notes screen within the same transaction.

The Complete button will initiate a save of the transaction. All validations will be performed, returning any errors to the user. If there are no errors, the transaction is saved, and the user is returned to the Open Ticket home page.

## 4. Not on File (Figure 4)

### 4.1 Name

#### 4.1.1 Behavior

This is a text field in which the user may enter an Account name.



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#### 4.1.2 Validation

No validation is necessary.

#### 4.1.3 Business Exceptions

None have been identified at this time.

#### 4.1.4 System Exceptions

None have been identified at this time.

### 4.2 Address

#### 4.2.1 Behavior

This is a free form text field in which the user may enter an Account's address.

#### 4.2.2 Validation

No validation is necessary.

#### 4.2.3 Business Exceptions

None have been identified at this time.

#### 4.2.4 System Exceptions

None have been identified at this time.

### 4.3 Zip

#### 4.3.1 Behavior

This is a text field in which the user may enter an Account's zip code.

#### 4.3.2 Validation

No validation is necessary.

#### 4.3.3 Business Exceptions

None have been identified at this time.

#### 4.3.4 System Exceptions

None have been identified at this time.

### 4.4 Geographic Framework button (lightening bolt graphic)

#### 4.4.1 Behavior

This will fill in the City (4.6) and State (4.7) fields if there is only 1 city for the zip code. If more than 1 city is in the entered zip code, the Multiple Cities Found page will be brought up, allowing the user to select a city. The City (4.6) and State (4.7) fields will then be filled with the user's selection.

#### 4.4.2 Validation

No validation is necessary.

#### 4.4.3 Business Exceptions

None have been identified at this time.

#### 4.4.4 System Exceptions

None have been identified at this time.

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Vehicle / Shop	

## **4.5 Country**

### **4.5.1 Behavior**

This is a drop down field containing the list of countries.

### **4.5.2 Validation**

No validation is necessary.

### **4.5.3 Business Exceptions**

None have been identified at this time.

### **4.5.4 System Exceptions**

None have been identified at this time.

## **4.6 City**

### **4.6.1 Behavior**

This is a text field in which the user may enter an Account's city. This field may also be filled by actions performed by the Geographic Framework button (4.4).

### **4.6.2 Validation**

No validation is necessary.

### **4.6.3 Business Exceptions**

None have been identified at this time.

### **4.6.4 System Exceptions**

None have been identified at this time.

## **4.7 State**

### **4.7.1 Behavior**

This is a drop down field containing the list of states. This field may also be filled by actions performed by the Geographic Framework button (4.4).

### **4.7.2 Validation**

No validation is necessary.

### **4.7.3 Business Exceptions**

None have been identified at this time.

### **4.7.4 System Exceptions**

None have been identified at this time.

## **4.8 Phone**

### **4.8.1 Behavior**

This is a text field in which the user may enter an Account's phone number.

### **4.8.2 Validation**

Entered data should be 10 digits for the US to include area code or the appropriate format for other countries.

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#### 4.8.3 *Business Exceptions*

None have been identified at this time.

#### 4.8.4 *System Exceptions*

None have been identified at this time.

### 4.9 **Contact Last Name**

#### 4.9.1 *Behavior*

This is a text field in which the user may enter a Contact's last name for the new Account.

#### 4.9.2 *Validation*

No validation is necessary.

#### 4.9.3 *Business Exceptions*

None have been identified at this time.

#### 4.9.4 *System Exceptions*

None have been identified at this time.

### 4.10 **Contact First Name**

#### 4.10.1 *Behavior*

This is a text field in which the user may enter a Contact's first name for the new Account.

#### 4.10.2 *Validation*

No validation is necessary.

#### 4.10.3 *Business Exceptions*

None have been identified at this time.

#### 4.10.4 *System Exceptions*

None have been identified at this time.

### 4.11 **Button Line Area – Add Account Not on File**

#### 4.11.1 *OK button*

##### 4.11.1.1 *Behavior*

If data is not present in the required fields the feedback message explains that a value needs to be entered in the field(s) that is/are blank. Two options are presented, OK and Cancel. OK takes the user back to the Add Account Not on File screen for data entry; Cancel dismisses the Add Account Not on File screen. OK will be the default selection.

##### 4.11.1.2 *Validation*

There must be data present in all fields except for Contact Last Name (4.9) and First Name (4.10) where only one needs to have data present.

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#### 4.11.1.3 Business Exceptions

None have been identified at this time.

#### 4.11.1.4 System Exceptions

None have been identified at this time.

#### 4.11.2 Cancel button

##### 4.11.2.1 Behavior

This button will dismiss the Add Account Not on File screen without saving any data.

##### 4.11.2.2 Validation

If data has been entered the following feedback message is displayed; "Are you sure you want to exit and lose the entered information?" Two options are presented, Yes and No. Yes will dismiss the screen and not save the data, No will take the user back to the Add Account Not on File screen.

The default button selection is "No".

##### 4.11.2.3 Business Exceptions

None have been identified at this time.

##### 4.11.2.4 System Exceptions

None have been identified at this time.

### 5. New Contact (Figure 5)

#### 5.1 Last Name

##### 5.1.1 Behavior

This is a text field in which the user may enter a Contact's last name for an already selected Account.

##### 5.1.2 Validation

No validation is necessary.

##### 5.1.3 Business Exceptions

None have been identified at this time.

##### 5.1.4 System Exceptions

None have been identified at this time.

#### 5.2 First Name

##### 5.2.1 Behavior

This is a text field in which the user may enter a Contact's first name for an already selected Account.

##### 5.2.2 Validation

No validation is necessary.

##### 5.2.3 Business Exceptions

None have been identified at this time.

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#### 5.2.4 System Exceptions

None have been identified at this time.

### 5.3 Button Line Area – Add Contact

#### 5.3.1 OK button

##### 5.3.1.1 Behavior

If data is not present in the Last Name (5.1) and/or the First Name (5.2) field(s), the feedback message explains that a value needs to be entered for Last Name (5.1) and/or First Name (5.2). Two options are presented, OK and Cancel. OK takes the user back to the Add Contact screen for data entry, Cancel dismisses the Add Contact screen. OK will be the default selection.

##### 5.3.1.2 Validation

There must be data present in the Last Name (5.1) and/or First Name (5.2) field(s).

##### 5.3.1.3 Business Exceptions

None have been identified at this time.

##### 5.3.1.4 System Exceptions

None have been identified at this time.

#### 5.3.2 Cancel button

##### 5.3.2.1 Behavior

This button will dismiss the Add Contact screen without saving any data.

##### 5.3.2.2 Validation

If data has been entered the following feedback message is displayed; “Are you sure you want to exit and lose the entered information?” Two options are presented, Yes and No. Yes will dismiss the screen and not save the data, No will take the user back to the Add Contact screen. The default button selection is “No”.

##### 5.3.2.3 Business Exceptions

None have been identified at this time.

##### 5.3.2.4 System Exceptions

None have been identified at this time.

## 6. Rules

6.1 Year, Make and Model domain values come from the database.

6.2 A Contact must be selected for every Account that is selected as a Shop.

6.3 The system should not search for or display any deactivated Accounts.

6.4 User needs to have ability to cancel a search at any time during the search.

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**6.5 Notes should be generated when any of the following events occur:**

User adds a "Not on File" Shop	Shop [Blank] was changed to "XXXX"	Create/Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
User adds a "Not on File" Shop Contact	Not on File Contact "First Name Last Name" was added for Account "XXXXX"	Create/Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
User changes the Shop Account	Shop "XXXX" was changed to "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
User changes the Type of Loss	Type of Loss "XXXX" was changed to "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
User changes the "Total Loss?"	Total Loss "XXXX" was changed to "XXXX".	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
User changes the Date of Loss	Date of Loss "XXXXXX" was changed to "XXXXXX"	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
User changes number of Theft Waiver Days	Theft Waiver Days "X" was changed to "X"	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop (North America)
User changes the Registration Number	Registration Number "XXXX" was changed to "XXXX"	Edit	Edit	Vehicle/Shop (Ireland, UK, Germany)
User changes the Class	Class "XX" was changed to "XX"	Edit	Edit	Vehicle/Shop (Germany)
User changes the Renter's Vehicle's Year	The Renter's Vehicle Year "XXXX" was changed to Year "XXXX"	Edit	Edit	Vehicle/Shop
User changes the Renter's Vehicle's Make	The Renter's Vehicle Make "XXXX" was changed to Make "XXXX"	Edit	Edit	Vehicle/Shop
User changes the Renter's Vehicle's Model	The Renter's Vehicle Model "XXXX" was changed to Model "XXXX"	Edit	Edit	Vehicle/Shop
User changes the Renter's	The Renter's Vehicle Other Make "XXXX" was changed to "XXXX"	Edit	Edit	Vehicle/Shop

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Vehicle Other Make text				
User changes the Renter's Vehicle Other Model text	The Renter's Vehicle Other Model "XXXX" was changed to "XXXX"	Edit	Edit	Vehicle/Shop

## 7. Security

A user is authorized through a login process to create or edit a reservation or ticket.





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## Revision History

Date	Version	Description	Author
12 July 2001	1.0	First draft	Maribeth Concannon
20 July 2001	2.0	Final draft	Maribeth Concannon
22 August 2001	2.1	Updates per changes made during SAS reviews	Maribeth Concannon
9/07/2001	2.2	Changed wording from Telephone Number to Phone Number.	L. Moellman

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## Use Case Specification: Bill-to

### 1. Bill-to

#### 1.1 Brief Description

This use case describes the "Bill-to process" within the context of the ticket or the reservation. The "Bill-to process" is limited here to adding and deleting an account number as a Bill-to, and adding, changing, extending and deleting an authorization.

This use case will encompass all of the requirements that are relevant from ECARS 1.0 as well as those from VRS which are deemed part of the 1<sup>st</sup> phase of ECARS 2.0. This use case only pertains to non-ARMS transactions.

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## 2. Flow of Events

### 2.1 Basic Flow

#### 2.1.1 Add a Bill-to

- 2.1.1.1 The user navigates, within the Ticket or the Reservation, to the Bill-to area.
- 2.1.1.2 The system allows the user to indicate who will be billed.
- 2.1.1.3 The user can search for an account by name or s/he can enter the account number directly.
- 2.1.1.4 If the user elects to search for the account, the system will first provide a list of the accounts already in use on the ticket or reservation (if applicable) and provide a list of the branch's most commonly used accounts, as determined by the criteria in the branch description in TX01. If the user elects to use an account not in this list, they can search across all of the accounts on file .
- 2.1.1.5 If there is no account in the system for the intended bill-to, see alternative flow: Account not on file. If the user elects to enter the account number without search, the system must validate the account before proceeding .
- 2.1.1.6 The user selects a contact . If the contact is not found, the user elects to add one and enters the contact's full name, phone number and phone number. Either the first name or last name is required. This is saved on the ticket / reservation, as well as being added as a contact for the account.
- 2.1.1.7 The user must select an authorization status.
- 2.1.1.8 System logs the details in the "Notes".
- 2.1.1.9 Use Case Ends

### 2.2 Alternative Flows

#### 2.2.1 Remove a Bill-to

- 2.2.1.1 The user navigates, within the Ticket or the Reservation, to the Bill-to area.
- 2.2.1.2 The user indicates that s/he wishes to remove a Bill-to.
- 2.2.1.3 The user selects the Bill-to account number which s/he wishes to remove from among the bill-tos on the ticket or reservation. Any bill-to on the ticket which has at least one ARMS authorization associated to it cannot be removed and therefore shouldn't be presented to the user as an option.
- 2.2.1.4 The system displays to the user all of the details of any authorizations associated will the Bill-to for that ticket or reservation along with the option to cancel their choice.
- 2.2.1.5 User elects to continue. If they elect to cancel, the use case ends .
- 2.2.1.6 The system removes the bill-to from the ticket or reservation as well as any authorizations and all required billing information associated to the bill-to and logs the details in the "Notes".
- 2.2.1.7 If there are other Bill-tos on the ticket or reservation, and they are a higher number bill-to, then they will be changed to a lower number. (For example, if Bill-to One is Smith Insurance and Bill-to Two is Brown Auto Body, and the user removes Smith Insurance from the reservation/ticket, then Brown Auto Body becomes Bill-to One.)

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2.2.1.8 The use case ends.

## 2.2.2 Add authorization details

The user navigates, within the Ticket or the Reservation, to the Bill-to area .

The user indicates that s/he wishes to add an authorization.

The system presents the user with the following fields:

- Authorization status (Authorized, Pending Authorization, Declined, Terminated, Reimbursed, Pending Call at Open)
- Daily amount of authorization
- Item(s) authorized
- Beginning date and time authorized
- Ending date and time authorized
- Final date of authorization (a.k.a. "Last Day")
- Person from the bill-to organization who gave the authorization.
- Maximum amount of authorization
- Maximum number of days of authorization
- Flat amount of authorization
- "All charges" authorization
- Information required by the bill-to (may be limited by legacy to the existing text fields for the Claim/PO/RO and Insured Name fields).

In order to add an authorization, the user must change the authorization status to "Authorized" and enter the required information, as determined by the situation. (See add daily authorization, add authorization maximums, flat authorization, last day and required information for the details.)

The system automatically enters the details of the authorization into the reservation or ticket notes detailing the Enterprise employee who performed the authorization as well as all of the associated details.

The use case ends.

### 2.2.2.1 Add daily authorization

The user indicates that s/he wishes to add a daily authorization.

User indicates the following:

The amount per day that is authorized.

The item or items to which that amount is to be applied.

Whether or not that amount includes tax or is "plus tax" which allows the tax(es) to be added to the authorization.

The date the authorization is effective. If the billing cycle is 24 hour, then the time is also required . These should default to the date and time that the ticket was opened, or to the date and time of the reservation (if available).

The end date of the authorization or the number of days of the authorization. If the number of days is indicated, then the system will determine the end date. If a 24 hour billing cycle, then the time is also required.

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The name of the person from the bill-to account who made the authorization.

#### 2.2.2.2 Add authorization maximums

The user indicates that s/he wishes to add an authorization maximum.

User indicates the following:

The maximum amount that the bill-to can be billed, the maximum number of days that they can be billed, or both . If they indicate both, the system will apply whichever is the lesser).

The name of the person from the bill-to account who set the maximum.

NOTE: The maximum amount is a flat maximum – there will be no option to indicate an amount + tax, etc...

#### 2.2.2.3 Last Day

User indicates the following:

The date beyond which no charges may be applied to the bill-to . If the ticket or reservation has a 24-hour billing cycle, then the time is required too.

The name of the person from the bill-to account who set the final date.

#### 2.2.3 Change Authorization Amount

2.2.3.1 This allows the user to change an authorization which has already been entered.

2.2.3.2 The user navigates, within the Ticket or the Reservation, to the Bill-to area.

2.2.3.3 The user indicates that s/he wishes to change the amount of an authorization for Bill-to.

2.2.3.4 If the user wants to change an existing amount for dates which have already been authorized, s/he indicates the authorization that s/he wishes to change and changes it. Because ARMS authorizations cannot be changed by the user, the system should not make any ARMS authorizations available to them.

2.2.3.5 The system automatically enters the details of the authorization into the reservation or ticket notes detailing the Enterprise employee who performed the authorization as well as all of the associated details.

2.2.3.6 The use case ends.

#### 2.2.4 Extend Authorization

2.2.4.1 The user navigates, within the Ticket or the Reservation, to the Bill-to area.

2.2.4.2 The user indicates that s/he wishes to extend an authorization for a specific Bill-to. The user should not have any authorizations available to them which are ARMS authorizations.

2.2.4.3 The system presents the user with the end date of the most recent authorization amount and allows them to change it.

2.2.4.4 If the user wishes to change the authorization amount, go to the Change Authorization alternative flow.

2.2.4.5 The user changes the end date to a date later than the date already in the authorization. If they enter a date which is the same as the date already entered, then the use case ends.

2.2.4.6 If the user attempts to change an end date for an authorization which has been "Last Dayed",

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then the system presents the user with an informational message and asks them to confirm the change. If they confirm, then the Last Day Date is updated accordingly. The authorization status remains "Terminated".

2.2.4.7 The system automatically enters the details of the authorization into the reservation or ticket notes detailing the Enterprise employee who performed the authorization as well as all of the associated details.

2.2.4.8 The use case ends.

## 2.2.5 "Last Day" authorization

2.2.5.1 The user navigates, within the Ticket or Reservation, to the Bill-to area.

2.2.5.2 The system provides the option to indicate that the end date of the authorization is final and cannot be changed. If the authorization is an ARMS authorization, this option is not available and the use case ends.

2.2.5.3 The user elects to make the end date of the authorization the LAST DAY.

2.2.5.4 The system automatically changes the authorization status to "Terminated" and enters the details of the authorization into the reservation or ticket notes detailing the Enterprise employee who performed the LAST DAY authorization as well as all of the associated details.

2.2.5.5 The use case ends.

## 2.2.6 Remove Authorization

2.2.6.1 The user navigates, within the Ticket or Reservation, to the Bill-to area.

2.2.6.2 The user indicates that s/he wishes to remove a single authorization for a specific Bill-to. If the authorization is an ARMS authorization, this option is not available and the use case ends.

2.2.6.3 The system presents an option to the user to cancel their choice, along with all of the details of the authorization they selected. The details include which item(s) the authorization applies to and the amount and dates covered.

2.2.6.4 User elects to continue. If they elect to cancel, the use case ends.

2.2.6.5 If the authorization they selected to remove is the only one on the ticket or reservation for that Bill-to, then the system requires changes the authorization status to "Declined" but allows the user to change the authorization status to "Pending".

2.2.6.6 The system automatically enters the details of the authorization removal into the reservation or ticket notes detailing the Enterprise employee who performed the authorization as well as all of the associated details.

2.2.6.7 The use case ends.

## 2.2.7 Remove all authorizations for a Bill-to Account

2.2.7.1 The user navigates, within the Ticket or Reservation, to the Bill-to area.

2.2.7.2 The user indicates that s/he wishes to remove all authorizations for a specific Bill-to by changing the authorization status to "Declined". If the authorization is an ARMS authorization, this option is not available and the use case ends.

2.2.7.3 The system presents an option to the user to cancel their choice, along with all of the details of

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the authorizations. The details include which item(s) the authorizations apply to and the amounts and dates covered.

2.2.7.4 User elects to continue. If they elect to cancel, the use case ends.

2.2.7.5 The system automatically enters the details into the reservation or ticket notes detailing the Enterprise employee who performed the authorization as well as all of the associated details.

2.2.7.6 The use case ends.

## 2.2.8 Account not on file

2.2.8.1 The user navigates, within the Ticket or Reservation, to the Bill-to area.

2.2.8.2 The user indicates that s/he wishes to bill an account which is not in the system.

2.2.8.3 The system presents fields to enter the name of the account, the billing address information, phone number and name of a contact for that account. All of the information is required. The address entry should follow the system standards which allow for the user to enter the zip code and address and have the system search for the appropriate city and state. If many city, state combinations are valid, the user should be allowed to select from them.

2.2.8.4 The user completes all of the information. If they omit any part of the information and try to continue, the system provides a feedback message indicating which information is missing. The system allows the user to update those items.

2.2.8.5 The system does not add this account to the account database.

2.2.8.6 The system automatically enters the details of the addition of the "Not on file" account into the reservation or ticket notes detailing the Enterprise employee who performed the action as well as all of the associated details.

2.2.8.7 The use case ends.

## 2.2.9 Adding Required Billing Information

2.2.9.1 The user navigates, within the Ticket or Reservation, to the Bill-to area.

2.2.9.2 The user indicates that s/he wishes to add "Required Billing Information"

2.2.9.3 The user indicates the account for which they want to add or update the information. Any information associated with bill-tos on the ticket which have at least one ARMS authorization associated to it cannot be changed and therefore, those accounts shouldn't be available to the user.

2.2.9.4 The system makes the Claim/PO/RO and the Insured Name fields available for edit.

2.2.9.5 If the account has listed at least one of these fields as required and/or that specific formatting is necessary, then the system indicates which field(s) is required and/or the format that the information must be in (if specified).

2.2.9.6 The user enters as much information as is available. (The information isn't required until the ticket is closed.)

2.2.9.7 The system automatically enters the details of the information, into the reservation or ticket notes detailing the Enterprise employee who performed the edit as well as all of the associated details.

2.2.9.8 The use case ends.



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### **3. Special Requirements – Bill-to**

#### **3.1 Number of users**

Only one user should be allowed to update authorization information on a ticket or reservation at a time.

Only one user should be allowed to add or remove bill-to account numbers on a ticket or reservation at a time.

#### **3.2 Callbacks**

Any update to authorizations should be taken into account by the callbacks engine in generating callbacks to renters and Bill-tos.

#### **3.3 Help**

If help text will be made available to the users, some explanation of why ARMS-authorized bill-tos are treated differently will be necessary.

#### **3.4 Authorization by car class**

When the user is adding an authorization amount, they must be allowed to look up the amount using a car class. Furthermore, if the retrieved rate is tiered, then the user must have the option either to select one of the rates or to indicate that the authorization is tiered and thereby associate all of the rates to the authorization.

#### **3.5 ARMS authorization**

Only one ARMS authorized account can be on a ticket/reservation at a time.

If a bill-to account receives an ARMS authorization and it is not in the bill-to ONE position, it must be changed to bill-to one and the other bill-tos must follow it. Therefore, if bill-to one is Joe's Body Shop (non-AMRS) and bill-to two is Allstate (ARMS) and Allstate sends an initial ARMS authorization, it becomes bill-to one and Joe's Body Shop becomes bill-to two.

### **4. Pre-Conditions**

#### **4.1 User logged In**

The user must be logged in to the reservation or ticket system.

### **5. Post-Conditions**

#### **5.1 None**

### **6. Extension Points**

#### **6.1 None**

### **7. Questions**

#### **7.1 Rate source**

How is adding a bill-to (or removing one) expected to impact the reservation or ticket's rate source? If no impact, should a message be provided to the user?

#### **7.2 European requirements**

European requirements still need to be documented. When will these be available?

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### 7.3 ARMS

Can the user change any Bill-to information on an ARMS ticket?

### 7.4 System generated notes

What details should be included in each note?

### 7.5 Name of authorizer

Should this name be free-form text or should a list of contacts for the account be used? If a list is optimal, then do omit the contact for "Not on File" bill-tos?

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# Enterprise Rent-a-Car

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## **Rental Redesign/ECARS 2.0**

### **Use Case Specification: Enter Cash Qualification**

### **Information**

**Version 1.5**

	Version: 1.5
Rental Redesign/ECARS 2	Date: 12/20/01
C:\WINDOWS\TEMP\Cash Qualification.doc	

## Revision History

Date	Version	Description	Author
05/01/2001	1.0	Initial Draft	David Beebe
05/18/2001	1.1	1 <sup>st</sup> Revision (After break to work on Open Retail Rental Ticket without Payment Use Case)	David Beebe
05/23/2001	1.2	2 <sup>nd</sup> Revision	David Beebe
06/01/2001	1.3	Revisions based upon feedback from user review with Mary and Jon.  1. OK/Exit renamed to "Save"  2. Removed Age from the Personal Information Area.  3. Removed Insurance information from Rental Information Area.  4. Removed "Other Items Received" from Rental Information Area.  5. Added Employee Number/password authorization in the basic and alternate flows.  6. Renter Information entered or changed in this form makes changes to the corresponding renter or additional driver information.  7. Added Supervisor's Phone Number to the Rental Personal Information Area.	David Beebe
06/07/2001	1.4	Revisions based upon feedback from Reservation team.  1. Combined Personal and Rental Information Areas into one.  2. Removed the following fields: First Name, Last Name, Social Security Number, Date of Birth, Street Address, Zip/Postal Code, Country, City, State/Province, Other Ownership, Home Phone Number, Work Phone Number, Other Phone Number (and phone type), Previous Address #1 and #2, Previous Employment Information, Spouse Employment Information, Credit Check Information.	David Beebe

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		<p>3. Also removed the corresponding Alternate Flows: No Match to Zip/Postal Code, Multiple City Results, Missing Name Information and Invalid Characters.</p> <p>4. Added the following fields: Insurance Company Name, Agent's Name, Agent's Phone Number and Policy Number.</p> <p>5. Password and Employee Name is only required when entering Cash Qualification Information during the Ticket process.</p> <p>6. Take out Supervisor's Phone Number. (Todd Shylanski 6/13/01)</p>	
06/21/2001	1.5	<p>1. Removed the following fields: Insurance Company Name, Agent's Name, Agent's Phone Number and Policy Number</p> <p>2. Added (Blank) as an option for the following fields: Ownership Rented Previously Do You Own a Car?</p>	David Beebe

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## Use Case Specification: Enter Cash Qualification Information

### 1. Enter Cash Qualification Information Use Case

#### 1.1 Brief Description

This use case will describe how the user and the system interact to input cash qualification information concerning renters and/or additional drivers. It will show the flow of events that occur when information is input and/or selected in this area.

### 2. Flow of Events

#### 2.1 Basic Flow

##### 2.1.1 Cash Qualification Information Area

The Enter Cash Qualification Information Use Case begins when the system displays the area for entry and selection of information about the person being cash qualified and the rental. The fields in this area are:

- How Long at the current address:
  - Years
  - Months
- Ownership:
  - (Blank)
  - Own
  - Rent
- Current Employer
- Position
- Supervisor's Name
- Spoke to Whom
- How Long at Current Job:
  - Years
  - Months
- Reason for Renting
  - Car In Shop
  - Weekend
  - Vacation
  - Other
  - Other Reason Field
- Previously Rented:
  - (Blank)
  - Yes
  - No
  - If So, When?

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- Do You Own a Car?:
  - (Blank)
  - Yes
  - No
- Reference #1
  - First Name
  - Last Name
  - Phone Number
  - Relationship
- Reference #2
  - First Name
  - Last Name
  - Phone Number
  - Relationship
- Reference #3
  - First Name
  - Last Name
  - Phone Number
  - Relationship
- Password
- Employee Number

*There are no default values for any of the above fields.*

#### 2.1.2 *Option to Cancel*

The system displays the option for the user to cancel/exit . At any point during the entry of cash qualification information the user could decide to cancel out of the entry process at which time the use case would continue at alternate flow Cancel/ Exit.

#### 2.1.3 *Option to Save*

The system displays the option to Save. At any point during the entry of cash qualification information the user could decide to Save, at which time the use case would continue at basic flow Save.

#### 2.1.4 *Address and Ownership Information Selection*

The user can select how long the person being cash qualified has lived at the current address.  
The user can also select whether the person being cash qualified owns or rents.



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#### 2.1.5 *Employment Information Entry and Selection*

- The user can enter the employment information about the person being cash qualified. They can enter the employer, the supervisor's name, the person being cash qualified employment position and whom the user spoke to when verifying.
- The user can also select how long the person being cash qualified has been employed at their current job.

#### 2.1.6 *Rental Information Entry/Selection*

- The user can select one or more reason(s) for renting. If the user selects the "other" option, the field for entry of information becomes available for entry. The user then enters the reason.
- The user can select whether the person being cash qualified has rented before. If the user selects "Yes", the field for entry of information about when they last rented becomes available. The user then enters when the last rental was. (See Special Requirements for note.)
- The user can select whether the person being cash qualified owns a car.
- The user can enter the insurance company name, agent's name, agent's phone number and the policy number information about the person being cash qualified.

#### 2.1.7 *References Information Entry*

For all three references listed, the user can enter the First Name, Last Name, Phone Number and Relationship.

#### 2.1.8 *"Approved by:" Employee Number and Password Entry*

The user enters the Employee Number and password that approved the cash qualification.

#### 2.1.9 *Select Save Option*

The user selects the option to Save.

#### 2.1.10 *Validation of Employee Number and Password*

The system validates the Employee Number and password that approved the cash qualification. If the user entered an invalid employee number and password combination the use case continues at alternate flow Invalid Employee Number and Password Combination. If the user entered an employee number and password that does not pass authority check the use case continues at alternate flow Authority Check Failed.

#### 2.1.11 *Save*

The system saves all the information entered or selected in the fields of the Cash Qualification. The saved information would include the following:

- How Long at the current address:
  - Years
  - Months

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- Ownership:
  - (Blank)
  - Own
  - Rent
- Current Employer
- Position
- Supervisor's Name
- Spoke to Whom
- How Long at Current Job:
  - Years
  - Months
- Reason for Renting
  - Car In Shop
  - Weekend
  - Vacation
  - Other
  - Other Reason Field
- Previously Rented:
  - (Blank)
  - Yes
  - No
  - If So, When?
- Do You Own a Car?:
  - (Blank)
  - Yes
  - No
- Reference #1
  - First Name
  - Last Name
  - Phone Number
  - Relationship
- Reference #2
  - First Name
  - Last Name
  - Phone Number
  - Relationship
- Reference #3
  - First Name
  - Last Name
  - Phone Number
  - Relationship
- The employee who selected to save the cash qualification information.

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#### 2.1.12 *End*

The Use Case ends.

### 2.2 Alternative Flows

#### 2.2.1 Cancel/ Exit

2.2.1.1 The user selects the option to cancel/exit.

2.2.1.2 The system displays a feedback message warning that the cash qualification data will be lost if the user selects to cancel/exit.

2.2.1.3 The system displays the following options:

- Yes: to exit and lose data.
- No: return to the cash qualification use case  
(The default option will be No: return to cash qualification.)

2.2.1.4 The user selects Yes the use case ends. If the user selects No then continue in basic flow at the point where the user selected to cancel/exit.

#### 2.2.2 Invalid Employee Number and Password Combination

2.2.2.1 The system displays a feedback message that the entered Employee Number and password is invalid.

2.2.2.2 The system prompts the user to enter a valid Employee Number/password.

2.2.2.3 The user selects to enter a valid Employee Number/password and returns to "Approved by" Employee Number and Password Entry.

#### 2.2.3 Authority Check Failed

2.2.3.1 The system displays a feedback message that the employee is not allowed to authorize cash qualification.

2.2.3.2 The system prompts the user to enter a valid Employee Number/password.

2.2.3.3 The user selects to enter a valid Employee Number/password and returns to "Approved by" Employee Number and Password Entry.

### 3. **Special Requirements for Enter Cash Qualification Information**

#### "Do You Own a Car" Text Fields

These fields could be left blank; there is no validation to make sure information was entered.

#### Previously Rented Text Field

The user can enter whatever they want to. They could enter things like "Last summer", "A few months ago". They could also enter date information like "April 2000" or a more formal date like

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"04/24/2001". The field could also be left blank; there is no validation to make sure information was entered.

#### Password and Employee Number

The system requires password and employee number verification when cash qualification information is entered during the open ticket process. The system will not require password and employee number verification during the reservation process.

#### 4. Pre-Conditions

A user is already authorized through a login process to access the panel that is necessary to:

- Create or edit a reservation.
- Open, edit or close a rental ticket.

#### 5. Post-Conditions

#### 6. Extension Points

#### 7. Questions

**Question:** How should the Employee Number Approval field work? Should this field be:

1. Automatically populated (and display only) based upon the user that is currently logged on and opening the ticket? (This assumes person opening ticket is also doing the cash qualification.)
2. Automatically populated based upon the user that is currently logged on and opening the ticket but able to be changed? (This assumes person opening ticket is also doing the cash qualification but also allow changes.)
3. Blank upon initial entry and allow entry of any employee (valid) number? (No assumptions about who is doing the cash qualification.)
4. Blank upon initial entry and have security to authorize employee number? (This way a manager could "authorize" a cash qualification with security.)

**Answer:** Since Cash Qualification information is a serious matter, the input from Jon and Mary is that the last choice is what they wanted. The user will need to enter a valid employee number and update code combination. However this will only be required for an open ticket.

**Question:** What European requirements are there?

**Answer:** Jon Jouris has indicated there could be translations for the U.K., Germany etc. Fields could be eliminated or labels could be changed.

As of 06/01/2001: once the feedback from the review has been integrated, an electronic copy of this document will be forwarded to the proper parties for European requirements and translations.

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## Rental Redesign/ECARS 2.0 Use Case Specification: Notes

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## Revision History

Date	Version	Description	Author
6/14/01	1.0	Initial Draft	M. Pallia
6/25/01	1.1	First Draft	D. Beebe
6/27/01	1.2	<p>Revisions after meeting and getting feedback from Maribeth, Mike P. and Jackie L.</p> <p>Changes are:</p> <ul style="list-style-type: none"> <li>• Rewriting for clarification.</li> <li>• Restated Brief Description.</li> <li>• Explained that Notes is accessed via a reservation or ticket.</li> <li>• Added detail to "Notes Summary"</li> <li>• Pulled sort orders and defaults from Special Requirements and back into document.</li> <li>• Added Questions to be asked of the business.</li> </ul>	D. Beebe
06/28/01	1.3	<p>Revisions after feedback in meeting with Marty Tichy.</p> <p>Changes are:</p> <ul style="list-style-type: none"> <li>• Date and Time combined since they are saved in the Notes database as one field.</li> <li>• Multiple users should be able to view the same note or notes. However only one at a time can edit. (This is application wide standard and does not belong in use case.)</li> </ul> <p>This is the version sent to Mary and Jon for the User Review on 7/2</p>	David Beebe

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7/5/01	1.4	Revisions based upon feedback from Mary and Jon. Changes are: <ul style="list-style-type: none"> <li>• Add Status (Reservation, Open and Close) to Summary</li> <li>• Change available Note Types to System, Callback and Internet Shop. Shop, Bill-To and Renter will be available in a later enhancement.</li> <li>• Removed from Add Note Sub Flow the ability for the user to select the Note Type. All Notes currently added will be "Callback" type.</li> <li>• Added the ability to Print a particular note or the entire summary list.</li> </ul>	David Beebe
8/6/01	1.5	Assigned requirements to Iteration and approved for testing.	Jackie Lambert
8/6/01	1.6	Updated Notes Types	David Beebe
09/04/01	1.7	Added information to supplemental requirements indicates what date and time the system displays when viewing saved note(s).	Dave Beebe
11/09/01	1.8	Removed requirements to Print Current Page.	Dave Beebe

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## Use Case Specification: Notes

### 1. Notes Use Case

#### 1.1 Brief Description

This use case describes how the user interacts with the system to view all notes associated to a ticket or reservation, select to view certain types of notes, add a new note or view the full details of a previously entered note.

### 2. Flow of Events

#### 2.1 Basic Flow

##### 2.1.1 Selection to View Notes

The Notes Use Case begins when the user navigates to the Notes area of a reservation or ticket. This could take place at any point in the reservation and ticket process. (Notes can be viewed at any point in the ticket process: when creating a reservation, editing the reservation, opening a ticket using the reservation, editing the open ticket, closing the ticket and after the ticket is closed. Notes will carry forward from a reservation to a ticket when a ticket is opened using the reservation.)

##### 2.1.2 System Searches for Notes

The system searches for and retrieves all notes associated to the reservation or ticket.

##### 2.1.3 System Displays Notes Summary

The system displays the notes to the user in a summary list. On initial entry to the Notes Summary List the system will display all notes, regardless of type, sorted from the newest to the oldest by date and time. The columns displayed to the user are the following:

- Date and Time (when the note was saved)
- Note
- Status
  - Reservation
  - Open
  - Close
- Note Type
  - Reservation
  - Shop
  - Bill-To
  - Renter
  - System
  - Callback
- Created By
- ARMS message status:
  - (Blank)
  - Sent

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#### 2.1.4 Option to Add Note, View Note Detail, Print Notes and change displayed Note Types

The system displays the options to select to:

- Add a new note to the reservation or ticket.
- View a single note that had been previously entered.
- Print (either the Current Page or All Notes)
- View notes of a particular Type and/or Status

#### 2.1.5 Add Note, View Note Detail and View Summary Based Upon Note Type Subflows

Depending on user preference, he or she will use one of the following three sub-flows: Add Note, View Note Detail and View Summary Based Upon Note Type . More commonly, the Add Note Sub-flow is used. If the user selects to print all Notes (regardless of Note Type and Status) the use case continues at alternate flow Print All Records.

### 2.2 Add Note Subflow

#### 2.2.1 Select to Add Note

The user selects to add a Note to the reservation or ticket .

- (A Note can be added at any point in the ticket process: when creating a reservation, editing the reservation, opening a ticket using the reservation, editing the open ticket, closing the ticket and after the ticket is closed.)
- System generated notes are defined in individual use cases. However they will use the same write process as manual Notes .

#### 2.2.2 Add Note Information Area

The system displays the area for the user to enter the Note. (Enhancement proposed for the future: System also displays the area for the user to select the Note Type. The possible Note Types are: Callback, Shop Bill-To and Renter.)

#### 2.2.3 Option to Save and Option to Cancel

The system displays the option to:

- Save
- Cancel

At any point during the Add Note process the user could decide to exit at which time the use case would continue at alternate flow Cancel. (If the user cancels without making an entry, no feedback message will be displayed.)

#### 2.2.4 User Entry of Note

The user enters the note.

#### 2.2.5 User Selects Option to Save

The user selects to Save.

#### 2.2.6 Validation Note was entered

The system validates that a note has been entered. If the system determines a note was not

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entered, the use case will continue at alternate flow No Note.

## 2.2.7 *Save Add Note information*

The system saves the note. This system also saves information from the following areas:

- Date and Time
- Note
- Status
- Note Type of "Callback"
- Created By

The user will not be able to select the Note Type, date & time, Status and the "Created By" party. These items are determined and populated by the system.  
*(As stated above, future proposed enhancements will allow the user to select the Note Type.)*

## 2.2.8 *End*

The system closes the Add Note area and the use case ends.

## 2.3 View Note Detail Subflow

### 2.3.1 *Select to View Note*

The user selects to view the details of a single, previously entered note within the summary list of notes for the selected reservation or ticket.

### 2.3.2 *View Note Detail Area*

The system displays the Note Detail showing:

- Date and Time
- Note
- Note Type
- Created By
- ARMS message status :

### 2.3.3 *Option to Close View Note Area*

The system displays the option to close the area that displays the details of a particular note. The system also displays the options to print the current Note.

### 2.3.4 *User Selects Option to Close the Viewed Note*

The user selects to close the View Note Detail area. If the user selects to print the current Note the use case continues at alternate flow Print Note.

### 2.3.5 *End*

The system closes the View Note Detail area and the use case ends.

## 2.4 View Summary Based Upon Note Type Subflow

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#### 2.4.1 *Select to View Summary Based Upon Note Type*

The user selects to the view notes summary of a certain note type.

#### 2.4.2 *Display Possible Note Types and Ticket Status to sort from*

The system displays the list of possible Note Types to select to sort from:

- All
- System
- Internet Shop

(Future Proposed Enhancements will allow the user to select to also sort from Shop, Bill-To and Renter.)

The system displays the list of possible Ticket Status to Sort From

- All
- Reservation
- Open
- Close

#### 2.4.3 *Options to Print*

The system displays the option to:

- Print All Notes

#### 2.4.4 *User Selects Note Type*

The user selects a Note Type they want to view.

#### 2.4.5 *System Searches for Notes*

The system searches for and retrieves notes associated to the ticket or reservation .

#### 2.4.6 *System Displays Notes Summary*

The system displays the notes to the user in a summary list. The columns displayed to the user are the following:

- Date and Time
- Note
- Note Type: based upon the type the user selected
- Created By
- ARMS message status

#### 2.4.7 *Print*

If the user selects to print all Notes (regardless of the currently displayed Note Type) the use case continues at alternate flow Print All Notes.

#### 2.4.8 *End*

The use case ends.

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## 2.5 Alternative Flows

### 2.5.1 No Note

2.5.1.1 The system displays a feedback message: "Please enter a Note if selecting to Save."

2.5.1.2 The user has the option to:

- Enter the note
- Exit the Add Note process

2.5.1.3 If the user selects to enter the note, use case proceeds to User Entry of Note in the Sub Flow "Add Note". If the user selects to exit the Add Note process the use case ends.

### 2.5.2 Cancel

2.5.2.1 The system displays a feedback message: "Are you sure you want to exit and lose the entered information?"

2.5.2.2 The user has the options:

- Yes (exit and lose the information)
- No (return to the use case at the point where the user selected to exit from.)  
The default option will be "No".

2.5.2.3 If the user selects to exit the Add Note process, the use case proceeds to System Displays Notes Summary in the Basic Flow . If the user selects No, the use case proceeds to User Entry of Note in the Add Note Subflow.

### 2.5.3 Print All Notes

2.5.3.1 The system initiates the Print Use Case.

2.5.3.2 The use case returns to the point where the user initiated the print function.

### 2.5.4 Print Note

2.5.4.1 The system initiates the Print Use Case .

2.5.4.2 The use case returns to the point where the user initiated the print function.

## 3. Special Requirements for Notes

- Previously entered notes may not be edited or deleted by the user.
- ystem generated and manually entered) will be displayed based upon the date and time of the physical terminal location of the user viewing the notes.

## 4. Pre-Conditions

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- A user is authorized through a login process to create or edit a reservation or ticket.
- The user has accessed a reservation or ticket, either in the process of editing or creating.

## 5. Post-Conditions

## 6. Questions

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## Enterprise Rent-A-Car

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# Rental Redesign/ECARS 2.0 Business Use-Case Specification: Open Retail Rental Ticket without Payment

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## Revision History

Date	Version	Description	Author
03/16/2001	1.0	Initial Draft (Initial creation of Use Case)	David Beebe
04/05/2001	1.1	Updating to make look and language like other Use Cases	David Beebe
05/10/2001	1.2	Version after reviews by System Analysts.	David Beebe
05/15/2001	1.3	Revision after feedback from Jeff, Todd and Systems Analysts	David Beebe
05/24/2001	1.4	Revision after reviews by Mary Schmitz and Jon Jouris	David Beebe
05/21/2001	1.5	Version as placed into Req. Pro	David Beebe
06/07/2001	1.6	<p>Revision made to match "Basic Reservation" Use Case.</p> <ol style="list-style-type: none"> <li>Split alternate flow "Under Age Soft Edit Restriction" into two alternate flows: <u>Under Age (18-20) Soft Edit Restriction</u> and <u>Under Age (21-24) Soft Edit Restriction</u>.</li> </ol> <p>Revision made to explain that matching Nat Res Reservation will be handled in a later iteration.</p> <ol style="list-style-type: none"> <li>Split alternate flow "Matching Reservations" into two alternate flows: <u>Matching Branch Reservation(s)</u> and <u>Matching Nat Res Reservation(s)</u></li> </ol>	David Beebe
06/19/2001	1.7	<p>Revisions made to "<u>Selection from Units Not Rented List</u>" alternate flow.</p> <ol style="list-style-type: none"> <li>Added Buy Back Indicator to the list of information that should be returned.</li> <li>Added statement that the default sort order for the list will be alphanumerically by the Unit Number.</li> </ol>	David Beebe
06/26/2001	1.8	<p>Revision made to match "Basic Reservation" Use Case.</p> <ol style="list-style-type: none"> <li>Split alternate flow "Expired Driver's License" into two alternate flows: <u>Expired Driver's License</u> and <u>Driver's License Expires Today</u>.</li> </ol>	David Beebe





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## Business Use Case Specification: Open Retail Rental Ticket without Payment

### 1. Open Retail Rental Ticket without Payment Use Case

#### 1.1 Brief Description

This use case will describe how the user and system interact to create a retail rental ticket. It will show the flow of events that occur when information is entered into a new retail type rental ticket so that it is completed.

### 2. Flow of Events

#### 1.1 Basic Flow

##### 1.1.1 Search Criteria

The Open New Retail Rental Ticket Use Case begins when the system displays the area for entry of search criteria for repeat renter information. The system displays all search criteria fields blanked out, allowing the user to enter any combination of the following information:

- Phone Number
- Last Name
- First Name
- Driver's License Number

##### 1.1.2 Options to Search, Clear/Reset and to select to Enter New Driver

The system displays the option to select to perform the search from information entered in the above fields. The system also displays.

- the option for the user to reset the entered information.
- to enter New Driver information

##### 1.1.3 User Entry of Name and Phone Number

The user enters the renter's first and last name and telephone number. (Last name could either be just the first couple letters or the complete last name) If the user selects to enter New Driver information the use case will continue at System Performs Reservation Search in the basic flow.

##### 1.1.4 User Selects Search Option

The user selects the option to perform the search. If the user only enters only the last name and selects to search, the use case will continue at Need More Search Criteria alternate flow.

##### 1.1.5 System Performs Repeat Renter Search

The system performs the search for matching repeat renter information if a renter's telephone number was entered in the initial search criteria area. If information was not entered in the renter's telephone number area, the use case will continue at Renter Personal Information Area in one of the subflows.

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#### 1.1.6 System Performs Reservation Search

The system searches for all the reservations that match the information entered. The search for the name will be a wildcard search.

#### 1.1.7 Reservation Search Results

The system finds no matching reservations and the use case continues at the next step in the basic flow. If the search produces one or more matching branch reservation then continue at alternate flow Matching Branch Reservation(s). If the search produces one or more matching Nat Res reservation, then continue at alternate flow Matching Nat Res Reservation.

#### 1.1.8 Repeat Renter Search Results

The system produces no matching repeat renter records and the use case continues at the next step in the basic flow. If the search produces one or more matching repeat renter match, then continue at alternate flow Matching Repeat Renter Record(s).

#### 1.1.9 Renter Personal Information Area

The system displays the area for entry and selection of information about the renter. The fields in this area are:

Name:

- Last Name
- First Name

Phone Number

- Home Phone Number
- Work Phone Number (and extension)
- Employer
- Other Phone Number (and phone type)

Home Address

- Address
- Zip/Postal Code
- Country
- City
- State/Province

Driver's License

- License Number
- Expiration Date
- Issuing Country
- State Issued
- SSN (Social Security Number)
- Date of Birth
- Eye Color
- Height
- Hair Color

Weigh tThe system also displays the option for the user to enter the work address. If the user selects the option, the use case continues at alternate flow Work Address Information Entry.

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#### 1.1.10 *Option to Complete*

The system displays the option for the user to complete the ticket. At any point the user could select this option.

#### 1.1.11 *Personal Information Area Field Population*

Unless a reservation or repeat renter information has been applied to the ticket the system populates the matching fields with any information previously entered in the basic flow step User Entry of Name and Phone Number. (See Special Requirements for table showing how information from the Initial Search Criteria Area fields is populated in the matching Renter Personal Information Area fields.)

The system also makes the information in the Information Area fields available for edit. The country, based upon the profile of the renting branch location, will be defaulted into the Country field.

#### 1.1.12 *Address and Zip/Postal Code Information Entry*

The user enters the Address and Zip/Postal Code.

#### 1.1.13 *Zip/Postal Code Search Option*

The system displays the option to search for the City and State/Province based upon the Zip/Postal code and Country.

#### 1.1.14 *Zip/Postal Code Search Selection*

The user selects the option and the system performs the search for the City and State/Province that match the Zip/Postal Code and Country.

#### 1.1.15 *Zip/Postal Code Search Results*

The system searches for and produces a single City and State/Province result and continues at the next step in the basic flow. If the search produces no matching city and State/Province information, the use case continues at alternate flow No Match to Zip/Postal Code. If the search produces multiple cities, the use case continues at alternate flow Multiple City Results.

#### 1.1.16 *City and State/Province Field Population*

The system populates the City and State/Province fields. The system also makes the information in these fields available for edit.

#### 1.1.17 *Phone and Driver's License Information Entry*

The user enters the home phone number, work phone number, other phone number and selects the other phone number type. (See Special Requirements for list of "Other" Phone Number Types.) The user also enters the License Number, License Expiration Date, State Issued, Date of Birth, Social Security Number, Height, Weight, Hair Color, Eye Color and selects the Work Address Option. The use case continues at alternate flow Other Address Information Entry.

#### 1.1.18 *Cash Qualification, Renter's Insurance and Additional Driver*

If cash qualification information needs to be gathered about the renter, the use case continues at alternate flow Cash Qualification Information. If insurance detail information needs to be

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gathered about the renter, the use case continues at alternate flow Insurance Information. If there are additional driver(s) and information needs to be gathered, continue at alternate flow Additional Driver.

#### 1.1.19 *Referral Information*

This use case extends to the Referral use case for entry, validation and saving of all information concerning the Referral source.

#### 1.1.20 *Dates and Rates*

This use case extends to the Dates/Rates use case for entry, validation and saving of all information concerning dates, rates, taxes and surcharges. While in the Dates/Rates area the user selects a rental vehicle to be applied to the ticket.

#### 1.1.21 *User Selects Option to Complete*

The user selects the option to complete the ticket.

#### 1.1.22 *System Displays Complete Options*

The system displays the option for the user to select the following type of complete tickets

- "Complete" If the user selects "Complete", the use case continues at subflow Complete Ticket.
- "Complete - Unit Pend" If the user selects "Complete – Unit Pend", the use case continues at subflow Complete – Unit Pend Ticket.
- "Complete - Prewrite" If the user selects "Complete – Prewrite", the use case continues at subflow Complete – Prewrite Ticket.

### 1.2 *Complete Ticket Sub-Flow*

#### 1.2.1 *User Selects Complete Option*

The user selects the "Complete" option.

#### 1.2.2 *Validation of complete Renter Information*

The system validates that information concerning the renter exists in all of the following areas:

Name:

- First Name
- Last Name

Address:

- Address
- Zip/Postal Code
- Country
- City
- State/Province

Driver's License:

- License Number
- License Expiration Date

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- State Issued
- Date of Birth
- Social Security Number
- Height
- Weight
- Hair Color
- Eye Color

### 1.2.3 Validation of Driver's License Expiration Date Information

The system validates that the information entered in driver's license expiration date field for the renter and additional drivers is greater than the current date. If user enters a driver's license expiration date that is less than the current date, the use case continues at alternate flow Expired Driver's License. If the user enters a driver's license expiration date that is the same as the current date, the use case continues at alternate flow Driver's License Expires Today.

### 1.2.4 Validation Of Date of Birth Information

The system validates that the Date of Birth for the renter and additional drivers is not greater or less than the restrictions for rental. If the user enters a Date of Birth that results in the renter's age being greater than the restrictions the use case continues at alternate flow Over Soft Edit Age Restriction. If the user enters a Date of Birth that results in the renter's age being 18-20, the use case continues at alternate flow Under Age (18-20) Soft Edit Restriction. If the user enters a Date of Birth that results in the renter's age being 21-24, the use case continues at Under Age (21-24) Soft Edit Restriction. If the user enter a Date of Birth that results in the renter's age being less than the hard edit age restriction the use case continues at alternate flow Under Hard Edit Age Restriction.

### 1.2.5 Validation Of Rate Information

The system validates the necessary rate information is complete.

- If there is a rate in the daily field there must be a rate in the hourly field.
- If there is a rate in the weekly field there must be a rate in the daily field.
- If there is a rate in the monthly field there must be a rate in the weekly field.
- If there is a rate that either the unlimited mileage option is selected or that both the corresponding excess charge and unlimited mileage fields are completed.

If the system determines that these requirements are not met, the use case will continue at alternate flow Incomplete Rate Information.

### 1.2.6 Other Validation

The system validates that a:

- unit has been selected (valid unit number and license plate or VIN number).
- Date out and Time Out fields are populated with valid values

### 1.2.7 Incomplete Ticket Feedback Message

If any of the above areas and fields are missing information the system will present the user with a feedback message as to what required fields are not filled to print a complete ticket. The system will display the option for the user to cancel the print action and return to the open ticket process.



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#### 1.2.8 *Save Ticket Information*

The system saves all the information entered in the fields of the open rental ticket process. This would be information from the following areas:

- Renter Personal Information
- Cash Qualification, Renter's Insurance and Additional Driver Information
- Referral Information
- Rental Information
- Additional Product(s), Taxes and Surcharges

The system saves other information that did not come from other use cases. This information would be:

- Ticket Number
- Employee number of person that opened the ticket
- Group/Branch information
- Information about the terminal the ticket was opened on

Links will take you to the tables/locations in this document that contain the full list of items to be saved.)

#### 1.2.9 *Print Ticket*

This use case extends to the Print Ticket Use case .

#### 1.2.10 *End*

The use case ends.

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### 1.3 Complete Unit-Pend Ticket Sub-Flow

#### 1.3.1 *Unit Pend Ticket*

This subflow is the same as the Complete ticket except that while in the Dates/Rates area, the user does not select a rental vehicle to be applied to the ticket.

#### 1.3.2 *User Selects Complete – Unit Pend Option*

The user selects the “Complete – Unit Pend” option.

#### 1.3.3 *Complete Unit-Pend Ticket Validation*

The system performs the same validation as the Complete Ticket subflow except that the system does not validate that a unit has been selected.

#### 1.3.4 *Incomplete Ticket Feedback Message*

If any of the above areas and fields are missing information the system will present the user with a feedback message as to what required fields are not filled to print a complete unit pending ticket. The system will display the option for the user to cancel the print action and return to the open ticket process.

#### 1.3.5 *Save Ticket Information*

The system saves all the information entered in the fields of the open rental ticket process. This would be information from the following areas:

- Renter Personal Information
- Cash Qualification, Renter's Insurance and Additional Driver Information
- Referral Information
- Rental Information
- Additional Product(s), Taxes and Surcharges

The system saves other information that did not come from other use cases. This information would be:

- Ticket Number
- Employee number of person that opened the ticket
- Group/Branch information
- Information about the terminal the ticket was opened on

Links will take you to the tables/locations in this document that contain the full list of items to be saved.)

#### 1.3.6 *Print Ticket*

This use case extends to the Print Ticket Use case.

#### 1.3.7 *End*

This subflow and the use case ends.

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## 1.4 Complete Pre-Write Ticket Sub-Flow

### 1.4.1 *Pre Write Ticket*

This subflow is the same as the Complete ticket except that the user could only enter part of the needed information. While in the Dates/Rates area the user selects a billing cycle and usually selects a rental vehicle to be applied to the ticket.

### 1.4.2 *User Selects Complete Pre-Write Option*

The user selects the "Complete Pre-Write" option.

### 1.4.3 *Validation of entry of Name*

The system validates that a first and last name has been entered for the renter.

### 1.4.4 *Validation of Billing Cycle*

This use case extends to the Dates/Rates Use Case to verify that a Billing Cycle has been selected.

### 1.4.5 *Validation Of Date of Birth Information*

he system validates that it is not greater or less than the restrictions for rental. If the user enters a Date of Birth that results in either the renter's or driver's age being greater than the restrictions the use case continues at alternate flow Over Soft Edit Age Restriction. If the user enters a Date of Birth that results in either the renter's or driver's age being 18-20, the use case continues at alternate flow Under Age (18-20) Soft Edit Restriction. If the user enters a Date of Birth that results in either the renter's or driver's age being 21-24, the use case continues at Under Age (21-24) Soft Edit Restriction. If the user enter a Date of Birth that results in either the renter's or driver's age being less than the hard edit age restriction the use case continues at alternate flow Under Hard Edit Age Restriction. (Date of Birth is not required for a prewrite, however if a date is entered it should be validated.)

### 1.4.6 *Incomplete Ticket Feedback Message*

If any of the above areas and fields are missing information the system will present the user with a feedback message as to what required fields are not filled to print a complete prewrite ticket. The system will display the option for the user to cancel the print action and return to the open ticket process.

### 1.4.7 *Save Ticket Information*

The system saves all the information entered in the fields of the open rental ticket process. This would be information from the following areas:

- Renter Personal Information
- Cash Qualification, Renter's Insurance and Additional Driver Information
- Referral Information
- Rental Information
- Additional Product(s), Taxes and Surcharges

The system saves other information that did not come from other use cases. This information would be:

- Ticket Number

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- Employee number of person that opened the ticket
- Group/Branch information
- Information about the terminal the ticket was opened on

#### 1.4.8 *Print Ticket*

This use case extends to the Print Ticket Use case.

#### 1.4.9 *End*

This subflow and use case ends.

### 1.5 Alternative Flows

#### 1.5.1 Need More Search Criteria

1.5.1.1 The system displays a feedback error message that the last name cannot be the only search criteria and to enter at least one more criteria.

1.5.1.2 The user selects to enter another piece of search criteria information and the use case proceeds back to User Selects Search Option in the basic flow.

#### 1.5.2 Matching Branch Reservation(s)

1.5.2.1 If the system finds that there is one or more current reservations based upon either the renter first and last name, telephone number, date of birth and driver's license number and State/Province, the system should display all the reservations that match the information that was input. The returned matched information list should include the following:

- Reservation Number
- Renter First Name
- Renter Last Name
- Pickup Date
- Pickup Time
- Car Class
- Pickup Branch Location
- Date Reservation Created
- Date Reservation Last Modified

1.5.2.2 The system will present a list for the user to select one of the displayed/summarized reservations. (See Special Requirements link for what reservations will not be displayed.)

1.5.2.3 The user selects a reservation from the list and continues at Renter Personal Information Area in the basic flow. The user can also select at any time to cancel out of the displayed list of reservations. If a phone number was entered in the initial search criteria area the use case will continue at Repeat Renter Search in the basic flow. If a phone number was not entered in the initial search criteria area the use case will continue at Renter Personal Information Area in the basic flow.

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### 1.5.3 Matching Nat Res Reservation(s)

1.5.3.1 In a later elaboration, the matching of a Nat Res Reservation to an open ticket will be taken care of.

### 1.5.4 Matching Repeat Renter Record(s)

1.5.4.1 If the system finds that there one or more repeat renter records that match based upon the telephone number, the system should display all the repeat renter records that match the information that was input. The returned information list should include the following:

- Renter First and Last Name
- Street Address, City, State and Postal Code
- Home Phone
- Office Phone (and extension)
- Driver License Number
- Driver License State
- Date Of Birth
- Date Last Rented

1.5.4.2 The system should also indicate if any of the repeat renter records on the above summary are on the Renter Warning/Do Not Rent List.

1.5.4.3 The system will present the option for the user to select the repeat renter record to apply to the open ticket.

1.5.4.4 The user selects a repeat renter record from the list. If the user selects a repeat renter record that is on the Renter Warning/Do Not Rent List, the use case will continue at alternate flow Renter Warning/Do Not Rent. The user can also select at any time to cancel out of the displayed list of repeat renter records and continue at Renter Personal Information Area in the basic flow.

1.5.4.5 The system displays the Renter Personal Information Area with the information from the selected repeat renter record populated in the correct fields. The fields in this area and the information that could come from the repeat renter record are:

#### Name:

- Last Name
- First Name

#### Phone Number

- Home Phone Number
- Work Phone Number (and extension)
- Employer
- Other Phone Number (and phone type)

#### Home Address

- Address
- Zip/Postal Code
- Country
- City
- State/Province

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#### Driver's License

- License Number
- License Expiration Date
- Issuing Country
- State Issued
- Date of Birth
- Social Security Number
- Height
- Weight
- Hair Color
- Eye Color

The system also displays the option to change the presented Repeat Renter Personal Information.

- 1.5.4.6 If the user selects the option to change the presented Renter Personal Information, the use case continues at Address and Zip/Postal Code Information Entry in the basic flow . If the user does not select the option to change the presented Renter Personal Information, the use case continues at Cash Qualification, Renter's Insurance and Additional Driver in the basic flow.

#### 1.5.5 Renter Warning/Do Not Rent

- 1.5.5.1 If the selected repeat renter record is on the renter warning/do not rent list the system displays a feedback message that the renter is on the Renter Warning List.

- 1.5.5.2 The system displays the option for the user to:

- Exit the open ticket process.
- View the detailed Renter Warning information.

- 1.5.5.3 The user selects to view the detailed Renter Warning Information. If the user selects the exit the open ticket process option the use case continues at alternate flow Cancel/Exit.

- 1.5.5.4 The system will display the more detailed information about the person along with messages about the warning. The warning must include the following:

- Repeat Renter First and Last Name
- Street Address
- City
- State
- Postal Code
- Home Phone
- Office Phone (and extension)
- Driver License Number
- Driver License State
- Date Of Birth
- Height
- Weight
- Social Security Number
- Employer
- The ticket number and group/branch that the warning report was referenced to.

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- The text information from the report detailing why the renter was placed on the warning/do not rent list.
- Reported by employee name
- Reported by employee number
- Reported by employee title
- Reported by employee phone number (and extension)
- Reported by employee group/branch location
- Date reported

1.5.5.5 The system displays the option to either rent or do not rent.

1.5.5.6 The user selects to rent and the use case continues at Renter Personal Information Area in the basic flow. If the user selects "Do Not Rent", the use case continues at alternate flow Cancel/Exit. In both cases the appropriate renter warning administrative programs will be notified.

#### 1.5.6 No Match to Zip/Postal Code

1.5.6.1 The system displays a feedback message that the zip/postal code and country combination does not produce matching city and state/province information.

1.5.6.2 The system prompts the user to manually enter city and state/province information.

1.5.6.3 The user selects to manually enter city and state/province information and the use case proceeds back to Phone and Driver's License Information Entry in the basic flow.

#### 1.5.7 Multiple City Results

1.5.7.1 The system displays a feedback message that the Zip/Postal Code and Country combination produces more than one matching city.

1.5.7.2 The system displays the list of cities and prompts the user to select a City.

1.5.7.3 The user selects a City from the list the use case proceeds back to City and State/Province Field Population in the basic flow.

#### 1.5.8 Other Address Information Entry

1.5.8.1 The system displays the area for entry and selection of other address information about the renter. The fields in this area are:

- Address Type
- Address
- Zip/postal Code
- Country
- City
- State/Province

1.5.8.2 The country, based upon the profile of the renting branch location, will be defaulted into the Country field.

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- 1.5.8.3 The user enters the Address and Zip/Postal Code.
- 1.5.8.4 The system displays the option to search for the city and State/Province based upon the Zip/Postal Code and Country
- 1.5.8.5 The user selects the option to perform the search for the City and State/Province that match the Zip/Postal Code and Country.
- 1.5.8.6 The system searches for the City and State/Province that match the Zip/Postal Code and Country.
- 1.5.8.7 The system produces a single City and State/Province result and continues at the next step in the basic flow. If the search produces no matching city and State/Province information, the use case continues at alternate flow No Match to Zip/Postal Code. If the search produces multiple cities, the use case continues at alternate flow Multiple City Results.
- 1.5.8.8 The system populates the City and State/Province fields. The system also makes the information in these fields available for edit.
- 1.5.8.9 The system displays the option for the user to exit and return to the basic flow.
- 1.5.8.10 The user selects this option and the use case proceeds back to Renter Personal Information Area in the basic flow.
- 1.5.9 Expired Driver's License
- 1.5.9.1 The system displays a feedback message that the entered driver's license expiration date is invalid because it is less than the current date.
- 1.5.9.2 The system prompts the user to:
- Change/enter valid expiration date.
  - Exit the open ticket process.
- 1.5.9.3 If the user selects to change the expiration date, the use case proceeds back to Phone and Driver's License Information Entry in the basic flow. If the user selects to exit the open ticket process the use case continues at alternate flow Cancel/Exit.
- 1.5.10 Driver's License Expires Today
- 1.5.10.1 The system displays a feedback message that the entered driver's license expiration date is the same as the current date.
- 1.5.10.2 The system prompts the user to:
- Continue with the open ticket process
  - Change/enter different expiration date
  - Exit the open ticket process
- 1.5.10.3 If the user selects to continue with the open ticket process, the use case continues at Cash Qualification, Renter's Insurance and Additional Driver in the basic flow. If the user selects to change the expiration date, the use case proceeds back to Phone and Driver's License Information Entry in the basic flow. If the user selects to exit the open ticket process the use case continues at alternate flow Cancel/Exit.



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#### 1.5.11 Over Age Soft Edit Restriction

- 1.5.11.1 The system determines that the age of the renter is equal to or greater than 70 years old.
- 1.5.11.2 The system displays a feedback message that the entered date of birth results in the age of the renter being over the age restriction. The system also displays the entered date of birth and the renter's age.
- 1.5.11.3 The system prompts the user to:
- Continue with open ticket process.
  - Enter correct date of birth.
  - Exit the open ticket process.
- 1.5.11.4 If the user selects to continue with the open ticket process, the use case continues at Cash Qualification, Renter's Insurance and Additional Driver in the basic flow. If the user selects to change the date of birth, the use case proceeds back to Phone and Driver's License Information Entry in the basic flow. If the user selects to exit the open ticket process, the use case continues at alternate flow Cancel/Exit.

#### 1.5.12 Under Age (18-20) Soft Edit Restriction

- 1.5.12.1 The system determines that the age of the renter is 18 to 20 years old.
- 1.5.12.2 The system displays a feedback message that the entered date of birth results in the age of the renter being under the age restriction. The system also displays the entered date of birth and the renter's age.
- 1.5.12.3 The system prompts the user to:
- Continue with open ticket process.
  - Enter correct date of birth.
  - Exit the open ticket process.
- 1.5.12.4 If the user selects to continue with the open ticket process, the use case continues at Cash Qualification and Renter's Insurance in the basic flow. If the user selects to change the date of birth, the use case proceeds back to Phone and Driver's License Information Entry in the basic flow. If the user selects to exit the open ticket process, the use case continues at alternate flow Cancel/Exit.

#### 1.5.13 Under Age (21-24) Soft Edit Restriction

- 1.5.13.1 The system determines that the age of the renter is 21 to 24 years old.
- 1.5.13.2 The system displays a feedback message that the entered date of birth results in the age of the renter being under the age restriction. The system also displays the entered date of birth and the renter's age.
- 1.5.13.3 The system prompts the user to:
- Continue with open ticket process.
  - Enter correct date of birth.
  - Exit the open ticket process.
- 1.5.13.4 If the user selects to continue with the open ticket process, the use case continues at Cash Qualification and Renter's Insurance in the basic flow. If the user selects to change the date of

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birth, the use case proceeds back to Phone and Driver's License Information Entry in the basic flow. If the user selects to exit the open ticket process, the use case continues at alternate flow Cancel/Exit.

#### 1.5.14 Under Age Hard Edit Restriction

1.5.14.1 The system determines that the age of the renter is equal to or under the age of 17 years old.

1.5.14.2 The system displays a feedback message that the entered date of birth results in the age of the renter being under the age restriction. The system also displays the entered date of birth and the renter's age.

1.5.14.3 The system prompts the user to:

- Correct the date of birth.
- Exit the open ticket process.

1.5.14.4 If the user selects to change the date of birth, the use case proceeds back to Phone and Driver's License Information Entry in the basic flow. If the user selects to exit the open ticket process, the use case continues at alternate flow Cancel/Exit.

#### 1.5.15 Additional Driver

1.5.15.1 The system displays the area for entry and selection of information about the additional driver. The fields in this area are:

Name:

- Last Name
- First Name

Phone Number

- Home Phone Number
- Work Phone Number (and extension)
- Employer

Other Phone Number (and phone type)

Home Address

- Address
- Zip/Postal Code
- Country
- City
- State/Province

Driver's License

- License Number
- Expiration Date
- Issuing Country
- State Issued
- Date of Birth
- Social Security Number

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- Height
- Weight
- Hair Color
- Eye Color

1.5.15.2 The system displays the option to search for the Repeat Renter Information for the additional driver based upon the home phone number.

1.5.15.3 The user enters home phone number of the additional driver.

1.5.15.4 The user selects the option and the system performs the search for matching repeat renter information.

1.5.15.5 The system produces no matching repeat renter records and the use case continues at the next step in this alternate flow. If the system produces one or more matching repeat renter records, the continue at alternate flow Matching Repeat Renter Record(s).

1.5.15.6 The user enters the first and last name of the additional driver.

1.5.15.7 The system displays the option for the user to select that the additional driver has the same address information as the renter. If the user selects this option, continue at 1.5.15.14. in this (alternate) flow.

1.5.15.8 The user enters the street address and zip/postal code.

1.5.15.9 The system displays the option to search for the City and State/Province based upon the Zip/Postal Code and Country.

1.5.15.10 The user selects the option and the system performs the search for the City and State/Province that match the Zip/Postal Code and Country.

1.5.15.11 The system searches for and produces a single City and State/Province result and continues at the next step in this alternate flow. The system also makes the information in these fields available for edit. If the search produces no matching city and State/Province information, the use case continues at alternate flow No Match to Zip/Postal Code. If the search produces multiple cities the use case continues at alternate flow Multiple City Results.

1.5.15.12 The system populates the City and State/Province fields. The system also makes the information in these fields available for edit.

1.5.15.13 The user enters the home phone number, work phone number, other phone number and selects the other phone number type. The user also enters the Driver's License Number, Driver's License Expiration Date, State Issued, Date of Birth, Social Security Number, Height, Weight, Hair Color and Eye Color. (See Special Requirements for list of "Other" Phone Number Type.) The system also displays the option for the user to select/list the additional driver "with valid license". If the user selects this option, the use case continues at the next step in this alternate flow.

1.5.15.14 The system displays the area for entry of additional driver's credit card information. The fields in this area include:

- Credit Card Number
- Credit Card Type
- Name that appears on the Credit Card
- Expiration Date

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*(There is currently no validation or processing of the entered credit card information.)*

1.5.15.15 If cash qualification information needs to be gathered about the additional driver, the use case continues at alternate flow Cash Qualification Information. If insurance detail information needs to be gathered about the additional driver, the use case continues at alternate flow Insurance Information.

1.5.15.16 The system displays the option for the user to:

- Add more additional drivers.
- Exit and return to the basic flow.

1.5.15.17 If the user selects to add more additional drivers the system adds another blank additional driver area and returns to the first step of this alternate flow. If the user selects to exit the use case returns to the point in the basic flow where the user selected to add the additional driver information.

1.5.16 Cash Qualification Information

1.5.16.1 If the rental requires cash qualification information about the renter or additional driver the use case extends to the Enter Cash Qualification Information Use Case.

1.5.17 Insurance Information

1.5.17.1 If the rental requires insurance information about the renter or additional driver the use case extends to the Enter Renter's/Additional Driver's Insurance Information Use Case.

1.5.18 Cancel/Exit

1.5.18.1 The user selects the option to cancel/exit.

1.5.18.2 The system displays a feedback message warning that the entered data will be lost if they select to cancel/exit.

1.5.18.3 The system displays the following options:

- Yes: to exit and lose data.
  - No: return to the use case they just selected to exit from.
- (The default option will be No: return to the area where the user selected the Cancel option from.)

1.5.18.4 The user selects Yes the use case ends. If the user selects No then continue in basic flow at the point where the user selected to cancel/exit.

## **2. Special Requirements for Open Retail Rental Ticket without Payment**

3.1 All lists in this document are the order that items should be placed.

3.2 The information entered in the fields of Initial Search Area will populate the fields of the Renter Personal Information the following manner:

Initial Search Area

Renter's Telephone Number = Home Phone Number

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Renter's Last Name = Last Name  
Renter's First Name = First Name  
Driver's License Number = Driver's License Number

### 3.3 List of Other Phone Number Types:

- Home
- Work
- Cell/Mobile
- Pager
- Other

3.4 With the last name the system searches in the same group as the renting branch for a match on the text, applying from left to right on the number of characters for records by the entered name. (There is an implied wildcard at the end of the character set entered, but no leading or imbedded wildcards within the character set.)

3.5 Later enhancements to the open ticket process will pre-populate information into the appropriate rate information fields.

### 3.6 Types of reservations not shown in the list are as follows:

- Voided reservations
- Reservations that are attached to an open ticket.
- Reservations that were attached to a ticket when it was closed.
- Available reservations where the Pick-up date is greater than 5 calendar days ago.

3.7 If a user cancels out of the open ticket process and a reservation had been previously applied, the reservation becomes available again.

## **3. Pre-Conditions**

A user is authorized through a login process to access the panel that is necessary to open ticket.

## **4. Post-Conditions**

## **5. Extension Points**

## **6. Questions**

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# Enterprise Rent-A-Car

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## Open Ticket Use Case: Retrieve Rates

Version 1.1

1. The user enters the location, date, and time of the rental.  
2. The system searches for available vehicles and rates.  
3. The system displays the results to the user.  
4. The user selects a vehicle and rate.  
5. The system creates a reservation and returns the results to the user.

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## Revision History

Date	Version	Description	Author
08/31/2001	1.0	First draft of Get Rates flow using Perot Engine(s)	Johnny S. Johnston
09/13/2001	1.1	Changes from business review	Johnny S. Johnston

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## Business Use-Case: Open Ticket Get Rates using Perot Engine(s)

### 1. Open Ticket Get Rates

#### 1.1 Brief Description

The purpose of this use case is to attempt to describe what information must be fed from the ECARS 2.0 system to the Perot Engine(s) in order to retrieve the appropriate rates for each product for the rental transaction. In this use case the products for which a rate is to be retrieved are the vehicle and all applicable coverages, where offered (CDW, PAI and SLP). The ECARS 2.0 system will provide the Perot system with specific information about the transaction in order to successfully retrieve rates. This use case is specifically addressing a walk in, open ticket, rental transaction.

### 2. Flow of Events

#### 2.1 Basic Flow

##### 2.1.1 Use Case Begins

This use case should be able to be invoked from anywhere in the Open Ticket process and initiate the request for rates, for appropriate products (in this case vehicle and coverages), from the Perot Engine(s) for a specific rental transaction. (Eventually, this use case will evolve into the one, which is used to get rates for all functions, Reservation, Open and Pre-Write)

##### 2.1.2 Information Needed For Rate Retrieval

The ECARS 2.0 system will need to provide specific information from the transaction to the Perot system to retrieve rates. Perot will require specific information before it will be able to search for products and their associated rates. Below is the list of items the Perot system will need to retrieve rates for an open ticket: (Note: Perot has six engines it uses to get rates for various products. The Rate engine for Vehicle, the Charge engine for estimating and allocating charges, the Equipment engine for ancillary items such as child seat and ski rack, the Coverage engine for insurance coverages, the Ancillary engine for add on fees such as youthful driver and additional driver and the General conditions engine for providing messages and standard conditions.)

- The pickup group and branch
- The pickup date
- The pickup time
- The return group and branch
- The return date
- The return time
- The booking channel (reservation origin)
- The rental status (ticket status – reservation, open, closed...)
- The rate source (account number, account name or default type)
- The rental type (insurance, body shop, dealership, etc.)
- The billing cycle

Note: There needs to be some way that the user has the ability specify a start charges date and time that is different than the pick-up date and time.

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Having values for all of the above items will allow the system to retrieve either a single rate plan or display all multiple rate plans to the user so they can choose which one to use. Once a single rate plan has been selected, entering or selecting the following information will allow the system to show a rate by product.

- The specific unit (vehicle), either a direct entry or selection from a listing of available units.
- The option to display the car classes associated with the rate plan.
- The coverage(s) (as related to car class)

### 2.1.3 Pickup Group and Branch

By the time this use case is invoked, the system should have already defaulted the pickup group and branch to the terminal location group and branch

### 2.1.4 Pickup date and time

If the user has not entered a pickup date and time, then the system will default the date and time to current. The user can then have the ability to change it.

### 2.1.5 Return Group and Branch

The system should default the return group and branch to the same as the pickup group and branch and allow the user to edit or change this.

### 2.1.6 Return Date and Time

The user is required to entered a return date and time.

### 2.1.7 Booking Channel – Reservation Origin

The reservation origin should be able to be distinguished by the system and have the appropriate value assigned by the system.

### 2.1.8 Rental Status

For this use case the status will be "Open". The system should be able to determine the status and assign the appropriate value for all instances of a rental transaction.

### 2.1.9 Rate Source

The user has either selected an account name or account number to locate and assign a rate source, or has selected to use the default rates.

### 2.1.10 Rental Type

The user is required to select a rental type.

### 2.1.11 Billing Cycle

The user is required to select a billing cycle.

With the above information entered into the system, selected by the user, or determined by the system, the Perot engine should be able to return any and all associated rate plans with a particular account.

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If there are multiple rate plans (agreements), the system should display this information to the user, and provide a way to select the appropriate one. Use case continues below.

If there is a single rate plan (agreement), the area is populated with that plan textual description.

#### 2.1.12 Unit (Vehicle) Selection

The system will allow the user to either enter a specific unit number or to have the ability to select one from a list of available units.

#### 2.1.13 Display all Car Classes for Rate Plan option.

The system will have a feature available which will allow the user to display all of the car classes associated with the specific rate plan selected and the corresponding rates for each car class.

Once the user has selected a single car class the system will display the units available for that car class. When the user selects a vehicle (Unit), this use case continues below.

#### 2.1.14 Get Rates

Once a specific unit has been identified or selected by the user, there should be some mechanism to allow the user to specify to the system to get the rates.

#### 2.1.15 System Returns Rates

With all of the previously entered or system derived information, the system determines by the specific unit, the rate and car class and returns the rate for the vehicle and the appropriate rate for all applicable coverages CDW, PAI and SLP.

The rate information is presented to the user by product for daily, weekly, monthly and hourly time periods. If a rate is not available for a time period, the system returns a value of zero.

This information is displayed to the user in a manner that allows editing or changing of the rates. Any changes in the rates will only apply to this specific rental transaction, and will not be reflected back in the rate plan.

If the system cannot find a car class, based on the unit, for that rate plan, the use case continues at Car Class Not Present In Account Rate Plan.

#### 2.1.16 User Accepts Rates Returned.

The system returns the rates for the time periods indicated for the vehicle, selected or indicated, and all available coverages, CDW, PAI and SLP. The user accepts the rate without changes, informs the renter of the rates by product, and saves the transaction.

The user also has an option to have the system to calculate total charges, for the selected products, over the duration of the rental. This will invoke the estimated charges use case.

The use case ends.

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#### 2.1.17 Car Class Not Present In Account Rate Plan

If the car class is not present in the account rate plan, the system notifies the user of this and gives the user the option of using default rates, selecting a different car class within the specific rate plan, selecting another rate source or manually entering in the rates for the vehicle and/or coverages.

If another rate source is selected, default or another account, the use case resumes at 2.1.9.

If another car class is selected within the specific rate plan, the use case resumes at 2.1.13.

If the user manually elects to manually enter the rates, there should be some function to allow this process. The rates will be saved with the rental transaction.

This use case ends.

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### 3. Special Requirements

- 3.1 If any component of the information needed for rate retrieval is changed which causes a change in the rates for any item, a message is displayed to the user informing them of such.
- 3.2 GDS Response Time  
Our contracts with GDS systems require that a response be returned to a rate request within seven seconds.

### 4. Pre-Conditions

- 4.1 User must be logged on
- The user is logged into ECARS 2.0 2.0 application and ECARS 2.0 has validated the user has privileges to perform rate verification.
  - The user has access to the local machine.
  - The user has access to the network.

### 5. Post-Conditions

- 5.1 < Post-condition One >

### 6. Extension Points

- 6.1 <Name of Extension Point>

7. Questions – all answered in initial business review.

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[illegible]

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## Revision History

Date	Version	Description	Author
03/06/01	1.0	Initial Draft	Allison Bruhn
03/08/01	1.1	1 <sup>st</sup> Revision	Allison Bruhn
03/09/01	1.2	2 <sup>nd</sup> Revision	Allison Bruhn
03/12/01	1.3	3 <sup>rd</sup> Revision	Allison Bruhn
03/14/01	1.4	4 <sup>th</sup> Revision- <i>(integrating comments from meeting with Jeff Roderick, Todd Shylanski, Mark Hansard, Martin Tichy, and Tim Erickson-Ciber)</i>	Allison Bruhn
3/16/01	1.5	5 <sup>th</sup> Revision- <i>(integrating comments from meeting with Jeff Roderick, Jon Jouris, Mary Schmitz,, and Tim Erickson-Ciber)</i>	David Beebe
3/21/01	1.6	6 <sup>th</sup> Revision- <i>(integrating comments from meeting with Todd Shylanski, Mark Hansard, Martin Tichy, and Tim Erickson-Ciber)</i>	David Beebe
4/18/01	1.7	Revision to update following items: <ul style="list-style-type: none"> <li>• Changing "customer" to account".</li> <li>• Combining the account number and name searches.</li> </ul>	

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# Business Use-Case Specification: Open Ticket Search

## 1. Open Ticket Search

### 1.1 Brief Description

This use case will describe how a user interacts with a system to search for and locate an open ticket. It will show the flow of events that occur when a search is conducted to locate an open ticket. The system will search for and locate an open ticket (or more than one open ticket) based on the search criteria entered by a user.

## 2. Flow of Events

### 2.1 Basic Workflow

2.1.1 The use case begins when the user chooses to search for an open ticket.

2.1.2 UC1.1.1 The system displays all search criteria fields emptied out, allowing the user to enter specific search criteria (as can be seen in Tables A and B). UC1.1.2 This use case will default the group/branch location to the machine's physical location. The user may choose to search by one, two or three (three being the maximum) of these search criteria. The criteria does not include the group/branch. If a ticket number is entered as well as other criteria, the system will only search for the ticket number and disregard any other search criteria.

2.1.3 TABLE A The user will most commonly enter the following information: Renter last name Renter phone number(s) Ticket Number Note: The current group branch location always displays

2.1.4 TABLE B Other criteria the user may enter: Unit number PO number, RO number, Claim number. (This is currently in one field.) Account name (the user can search for a account name based on, bill-to, shop. Account number (same as Account name) Renter First Name (along with Renter Last Name) Ticket Open Date Rental Vehicle License Plate Number Search by either a single group/branch, or entire group. (This is the location that opened the contract.) Note: The current group branch location always displays. The user may search by either account name or number: not by both.

2.1.5 The use case continues with sub flows (Renter Last Name through Ticket Number) for renter last name, renter home phone number, and ticket number (as shown in Table A). The use case can be read at any of these sub flows (a user is most likely to search by one of these criteria more often than the criteria identified in Table B). If the user chooses to search by criteria listed in Table B, the use case continues with the alternative workflows (No Ticket Found through Rental Vehicle License Plate Number).

### 2.2 Renter Name-Sub Flow

2.2.1 The user chooses to search for an open ticket by entering alphanumeric text in both the renter first and last name fields or just the last name field.

2.2.2 The system searches for a match on the text, applying from left to right on the number of characters for an open ticket by the entered renter name. (There is an implied wildcard at the end of the character set(s) entered but no leading or imbedded wildcards within the character set(s).)

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- 2.2.3 The system produces and displays the result set if one or more tickets are found.
- 2.2.4 If no open ticket(s) are found with the name entered, continue to alternate flow No Ticket Found. If the user enters only a first name continue at alternate flow Renter First Name Only.
- 2.2.5 The user selects to view the details of a single open ticket from the list and the use case ends at this point.

### **2.3 Renter Phone Number-Sub Flow**

- 2.3.1 The user chooses to search for an open ticket by entering a renter phone number. (The number entered must be the full number including area code.)
- 2.3.2 The system searches for an open ticket with any matching renter phone number regardless of the phone number type. (Match must be exact: no wildcard search.)
- 2.3.3 The system produces and displays the result set if one or more tickets are found.
- 2.3.4 If no open ticket(s) is found with the phone number entered, continue to alternate flow No Ticket Found.
- 2.3.5 The user selects to view the details of a single open ticket from the list and the use case ends at this point

### **2.4 Ticket Number-Sub Flow**

- 2.4.1 The user chooses to search for an open ticket by entering a ticket number.
- 2.4.2 The system searches for an open ticket with any matching ticket number. (Match must be exact: no wildcard search.) The system produces and displays the result set if one or more tickets are found.
- 2.4.3 If no open ticket is found with the ticket number entered, continue to alternate flow No Ticket Found
- 2.4.4 The user selects to view the details of a single open ticket from the list and the use case ends at this point.

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### 3. Alternative Workflows

#### 3.1 No Ticket Found

3.1.1 If no open ticket is found based on either the last name, phone number, ticket number, unit number, PO/RO/Claim number, account name, account number, ticket open date and the location entered, the user can continue to 2.1.3 in the main flow or choose not to perform another search and the use case ends.

#### 3.2 Renter First Name Only

3.2.1 The user cannot search for an open ticket by entering the renter's first name and leaving the last name field blank.

3.2.2 The system will not allow the user to enter a first name unless a last name is present

3.2.3 The use case ends and continues at the Renter Name sub flow.

#### 3.3 PO/RO/Claim Number

3.3.1 The user chooses to search for an open ticket by entering either a PO/RO/Claim number.

3.3.2 The system searches for a match on the text, applying from left to right on the number of characters for an open ticket by the entered PO/RO/Claim number. The system produces and displays the result set if one or more tickets are found.

3.3.3 If no open ticket(s) are returned with the entered PO/RO/Claim number, the user can continue to alternate flow No Ticket Found.

3.3.4 The user selects to view the details of a single open ticket from the list and the use case ends at this point.

#### 3.4 Unit Number

3.4.1 The user chooses to search for an open ticket by entering a unit number.

3.4.2 The system searches for an open ticket with any matching unit number. (Match must be exact; no wildcard search.) The system produces and displays the result set if one or more tickets are found.

3.4.3 If no open ticket is returned with the entered unit number, the user can continue to alternate flow No Ticket Found.

3.4.4 The system displays records found and the use case ends at this point.

#### 3.5 Bill-To/Shop Account Name Search

3.5.1 The user chooses to search for an open ticket by entering alphanumeric text in the account name

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field where the account could be the bill-to and/or the shop.

- 3.5.2 The system searches for a match on the text, applying from left to right on the number of characters for an open ticket by the entered account name. (There is an implied wildcard at the end of the character set entered but no leading or imbedded wildcards within the character set.) The system produces and displays the result set if one or more tickets are found.
- 3.5.3 If no open ticket is returned with the entered referral source customer, the user can continue to alternate flow No Ticket Found.
- 3.5.4 he user selects to view the details of a single open ticket from the list and the use case ends at this point.

### **3.6 Account Number Search**

- 3.6.1 The user chooses to search for an open ticket by entering alphanumeric text in the account number field where the account could be the bill-to and/or shop.
- 3.6.2 The system searches for an open ticket by the entered account number. (Match must be exact: no wildcard search.) The system produces and displays the result set if one or more tickets are found.
- 3.6.3 If no open ticket is returned with the entered account, the user can continue to alternate flow No Ticket Found.
- 3.6.4 The user selects to view the details of a single open ticket from the list and the use case ends at this point.

### **3.7 Ticket Open Date**

- 3.7.1 The user chooses to search for an open ticket containing by entering the date that the ticket was opened .
- 3.7.2 The system searches for an open ticket by the entered ticket opening date. (Match must be exact: no wildcard search.) The system produces and displays the result set if one or more tickets are found.
- 3.7.3 If no open ticket is returned with the entered ticket opening date, the user can continue to alternate flow No Ticket Found.
- 3.7.4 When the user elects to search on a date for open contracts, the search will pull all contracts with an open contract date 1 day prior through 1 day after the user specified date.
- 3.7.5 The user selects to view the details of a single open ticket from the list and the use case ends at this point.

### **3.8 Rental Vehicle License Plate Number**

- 3.8.1 The user chooses to search for an open ticket containing by entering rental vehicle license plate

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number.

- 3.8.2 The system searches for an open ticket by the entered entering rental vehicle license plate number. (Match must be exact: no wildcard search.) The system produces and displays the result set if one or more tickets are found.
- 3.8.3 If no open ticket is returned with the entered ticket opening date, the user can continue at alternate flow No Ticket Found.
- 3.8.4 The user selects to view the details of a single open ticket from the list and the use case ends at this point.

## 4. Special Requirements

- 4.1 The user must have the ability to sort within the table.

## 5. Pre-Conditions

- 5.1 A user is authorized through a login process to access the panel that is necessary to search for open tickets.

## 6. Post-Conditions

- 6.1 <Post-condition One>

## 7. Extension Points

- 7.1 <name of extension point>

## 8. FAQ

- 8.1.1 All the current search parameters are based upon an "AND" relationship. Should the system give the user the option to search by an "OR" relationship?
- 8.1.2 Answer: No

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# Rental Redesign/ECARS 2.0

## Use Case Specification: Vehicle/Shop

Version 3.1

you can find out more about the project on the project website. The project website is a great place to find out more about the project and the team. It also provides a great place to find out more about the project and the team.

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## Revision History

Date	Version	Description	Author
07/10/2001	1.0	First Draft	D. Beebe
07/12/2001	1.1	Revisions based upon feedback from meeting with Mike P. and Jackie L.	D. Beebe
7/16/2001	1.2	<p>Revisions based upon feedback from Mary S. and Jon J.</p> <ul style="list-style-type: none"> <li>• "Accident" changed to "Damage."</li> <li>• Removed steps for user choosing to search for make and model. <ul style="list-style-type: none"> <li>○ Once a user selects a Year the list of possible models are displayed.</li> <li>○ Once a user selects a Make the list of possible models is displayed.</li> </ul> </li> <li>• Removed requirement that the user must select full (year, make, model) renter vehicle information.</li> <li>• Removed enabling the "Other Make", "Other Model" and "Other Color" fields based upon selecting "Other" in the "Make", "Model" and "Color" fields.</li> </ul>	D. Beebe
7/17/2001	1.3	<p>Combined the Renter's Vehicle and Shop Use Cases back together.</p> <p>(In the GUI ECARS and the Functional Specs these two areas were combined. However when Ciber worked on the baseline code they were separated. Based upon feedback from Mary and Jon for ECARS 2.0 Renter's Vehicle and Shop were merged.)</p>	D. Beebe
7/24/2001	1.4	Updated "Add New Contact" to say that a user may enter the last and/or first name. The requirement previously stated that both were needed.	D. Beebe
7/30/2001	1.5	Added to Supplemental Requirements. Included all of the situations that the system should generate a note.	D. Beebe

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8/2/2001	1.6	<ol style="list-style-type: none"> <li>1) Added domains for "Type of Loss"</li> <li>2) Added to Supplemental Specs that the system should generate a note when the user changes the renter's vehicle.</li> </ol>	D. Beebe
8/3/2001	1.7	<ol style="list-style-type: none"> <li>1) Added alternate "European Branch Short List" when selecting a Shop.</li> <li>2) Added German Vehicle and Class information alternate flow.</li> </ol>	D. Beebe
8/8/2001	1.8	Revision based upon feedback from Jon Jouris. Vehicle Notes will only be viewable from this screen and will not be saved to Notes.	D. Beebe
8/9/2001	1.9	<p>Revisions based upon feedback from Chris Carr</p> <ol style="list-style-type: none"> <li>1. Default values of drop downs is "Blank"</li> <li>2. Removed step to search for full account information after selection as shop: system already did this in previous step.</li> <li>3. Removed viewing full account details.</li> <li>4. When selecting a "Not on File" account , added functionality to get city and state from zip/postal code.</li> </ol>	D. Beebe
8/16/2001	2.0	<ol style="list-style-type: none"> <li>1. Changed telephone to phone.</li> <li>2. Corrected one change missed in version 1.4.</li> <li>3. The user can only select one type of loss.</li> <li>4. Removed exit option from No Contact alternate flow.</li> </ol>	D. Beebe
8/20/2001	2.1	Changed name of use case from Renter's Vehicle/Shop to Vehicle/Shop.	D. Beebe
8/28/2001	2.2	<ol style="list-style-type: none"> <li>1. Added "Zero Days" to list of Theft Waiver Days</li> <li>2. Added note that "Theft Waiver Days" field is not displayed in Europe.</li> <li>3. Added note that the vehicle "Year" is not displayed in UK.</li> </ol>	D. Beebe



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9/4/01	2.3	<ol style="list-style-type: none"> <li>1. Added two European requirements for system generated notes.</li> <li>2. Vehicle Year field is not present in UK or Ireland.</li> <li>3. License plate field is removed.</li> <li>4. Registration number field added for Europe.</li> <li>5. Zero theft waiver days removed.</li> <li>6. Date of Loss not required.</li> </ol>	D. Beebe
9/6/01	2.4	<ol style="list-style-type: none"> <li>1. Added the values that are in the drop down for the class field in Germany.</li> </ol>	D. Beebe
9/7/01	2.5	<p>Changed wording from Account Search to Search.</p> <p>Changed wording from Telephone Number to Phone Number.</p>	L. Moellman
9/19/2001	2.6	Separated the three system generated notes for when the user changes the renter's vehicle Year, Make and/or Model.	D. Beebe
9/25/01	2.7	Added spec noting what information should display in the Navigation Bar for Vehicle/Shop	D. Beebe
10/23/2001	2.8	<ol style="list-style-type: none"> <li>1) Removed system note "Not on File Account XXXX has been added as a Shop".</li> <li>2) Changed system note "Not on file contact XXXX was added for Shop Account XXXX" to "Not on file contact XXXX was added for Account XXXX"</li> </ol>	D. Beebe
10/29/2001	2.9	<ol style="list-style-type: none"> <li>1) Corrected "driveable" to "drivable".</li> <li>2) Added requirements indicating what happens to fields when a reservation is edited.</li> </ol>	D. Beebe
11/13/2001	3.0	<ol style="list-style-type: none"> <li>1) Changed theft waiver days from "One Day", "Two Days", "Three Days" to "1 Day", "2 Days" and "3 Days".</li> <li>2) Added system generated notes for Other Make and Other Model</li> </ol>	D. Beebe

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11/20/2001	3.1	Removed requirement to have previously selected Bill-To and/or Referral appear at the top of the Branch Short List.	D. Beebe
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11/20/2001 3.1 Removed requirement to have previously selected Bill-To and/or Referral appear at the top of the Branch Short List. D. Beebe

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# Use Case Specification: Vehicle/Shop

## 1. Vehicle/Shop Use Case

### 1.1 Brief Description

This use case describes the how the user interacts with a system to indicate the renter's type of vehicle that is being repaired, notes about the vehicle, whether the vehicle is drivable, the type of loss, the date of loss and the theft waiver days. This use case also describes how the user interacts with a system to indicate which shop a renter's vehicle is being repaired at.

## 2. Flow of Events

### 2.1 Basic Flow

#### 2.1.1 Select Vehicle/Shop

The Vehicle/Shop Use Case begins when the user navigates to the Vehicle/Shop area of a reservation or ticket. This could be initiated at any point during the Reservation/Open Ticket process.

#### 2.1.2 System displays the Select Vehicle, Loss Information and Select Shop Areas

The system displays an area for the user to select and enter information about the renters vehicle. The fields displayed to the user are the following:

- Year (If the physical terminal location is in the U.K. and Ireland the system does not display this field.)
- Make
- Other Make
- Model
- Other Model
- Color
- Other Color
- Registration Number (If the physical terminal location is in Europe the system displays this field.

If the physical terminal location is in Germany the system also displays the following field to the user:

- Class
  - (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

(The Legacy/ECARS 1.0 system does not store the registration number or the "Schwackeliste" Class in Germany.)

If the physical terminal location is in Germany also displays the following fields to the user;

- Vehicle Type
- Number of Doors
- Fuel Type
- Engine Size
- Engine Power
- Class

The system also displays an area for the user to enter and select loss information about the

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vehicle. The fields displayed to the user are the following:

- Is Car Drivable?:
  - (Blank)
  - Yes
  - No
- Type of Loss:
  - (Blank)
  - Damage
  - Theft
- Total Loss
  - (Blank)
  - Yes
  - No
- Date of Loss
- Theft Waiver Days (If the physical terminal location is in Europe the system does not display this field.)
  - (Blank)
  - 1 Day
  - 2 Days
  - 3 Days

The system also displays an area for the user to enter Notes about the Vehicle.

The default values for the above fields is (Blank)

The system displays an area for the user to select an account from the Branch Short List. The system also gives the user the option to:

- Enter a Legacy Customer Number. If the user chooses this option, the use case continues alternate flow Enter a Legacy Customer Number.
- Search for an Account. If the user selects this option, the use case continues at alternate flow Search.
- Add a "Note on File" Shop to the reservation/open ticket. If the user selects this option, the use case continues at alternate flow Add Not on File Account.

### **2.1.3 User Decides to Search for Year**

The user initiates a search for the year a renter's vehicle was manufactured.

### **2.1.4 System Searches for Vehicle Year**

The system retrieves and displays the list of years that a user may select from. ==

### **2.1.5 User Selects the Vehicle Year**

The user selects the year of the renter's vehicle.

### **2.1.6 System Searches for Make**

The system retrieves and displays the list of possible makes to choose from for the previously selected (vehicle) year.

### **2.1.7 User Selects the Make**

The user selects the make of the renter's vehicle. The user can also choose to select "Other" and/or enter text in the "Other Make" field.

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#### 2.1.8 System Searches for Model

The system retrieves and displays the list of possible models to choose from for the previously selected make.

#### 2.1.9 User Selects the Model

The user selects the model of the renter's vehicle. The user can also choose to select "Other" and enter text in the "Other Model" field. If the physical terminal location is in Germany, the use case continues at Alternate Flow German Vehicle and Class Information.

#### 2.1.10 System displays Colors

The system retrieves and displays the list of colors to choose from.

#### 2.1.11 User Selects the Color

The user selects the color of the renter's vehicle. The user can also choose to select "Other" and enter text in the "Other Color" field.

#### 2.1.12 User Enters the Vehicle Note

The user enters a note about the renter's vehicle.

#### 2.1.13 User Selects and Enters the Loss Information

The user selects whether the car is drivable, the type(s) of loss and the date of loss. If the user selects "Theft" as a type of loss the use case continues at alternate flow Theft Waiver Days. User Selects to display Branch Short List

he user selects the option to display the branch short list.

#### 2.1.14 System displays Branch Short List

The system retrieves and displays the Branch Short list. The columns that are displayed to the user are (from left to right).

- Account name
- Legacy Customer Number (called Account Number in ECARS 2.0)
- Account type
- Owning Group and Branch
- Address
- City
- State
- Zip
- Phone Number(s)

If the physical terminal location is in Europe, the use case continues at Alternate Flow European Branch Short List.

#### 2.1.15 User selects Account from Branch Short List

The user selects an account from the list. If the user does not choose an account from the list, the use case continues at alternate flow Search.

#### 2.1.16 System Displays Contacts

The system displays the list of Contacts for the selected Account to the user along with "Unknown". (All Accounts have a listing of "Unknown" as a Contact.)

The column displayed to the user will be the following:

- Last Name

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- First Name

If there are no Contacts identified for a particular Account besides "Unknown", the use case continues at alternate flow No Contacts.

#### 2.1.17 *Option to Select Contact or Add New Contact*

The user has the option to select a contact from the list or add a New Contact.

#### 2.1.18 *User Selects Contact*

The user selects a contact from the list. If the user chooses to add a new contact, the use case continues at alternate flow Add New Contact.

#### 2.1.19 *User Selects to Exit the Vehicle/Shop Area*

The user selects to exit the Vehicle Area/Shop. (From here, the user can navigate to any other area within the Reservation/Open Ticket.)

#### 2.1.20 *Validation of the Date of Loss and Theft Waiver Days*

The system validates the value in the date of loss field. If a date of loss is not valid because:

- The date does not exist (February 30)
- The date is greater than today's date.

the use case continues at alternate flow Invalid Date Value.

#### 2.1.21 *End*

The use case ends.

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## 2.2 Alternative Flows

### 2.2.1 German Vehicle and Class Information

- 2.2.1.1 The system retrieves and displays the list of Vehicle Types that a user may select from for the previously selected model.
- 2.2.1.2 The user selects the Type of the renter's Vehicle.
- 2.2.1.3 The system retrieves and displays the list of Number of Doors that a user may select from for the previously selected Vehicle Type.
- 2.2.1.4 The user selects the Number of Doors for the renter's vehicle.
- 2.2.1.5 The system retrieves and displays the list of Fuels that a user may select from for the previously selected Number of Doors for the renter's vehicle.
- 2.2.1.6 The user selects the Fuel type for the renter's vehicle.
- 2.2.1.7 The system retrieves and displays the list of Engine Sizes that a user may select from for the previously selected Fuel type for the renter's vehicle.
- 2.2.1.8 The user selects the Engine Size for the renter's vehicle.
- 2.2.1.9 The system retrieves and displays the list of Engine Powers that a user may select from for the previously selected Engine Size for the renter's vehicle.
- 2.2.1.10 The user selects the Engine Power for the renter's vehicle.
- 2.2.1.11 The system retrieves and displays the Class for the renter's vehicle.
- 2.2.1.12 The use case continues at System displays Colors in the basic flow.

### 2.2.2 Theft Waiver Days

- 2.2.2.1 When the user selects "Theft" as a type of loss, the system enables the "Theft Waiver Days" field.
- 2.2.2.2 The user selects the number of theft waiver days.
- 2.2.2.3 The use case returns to User Selects to Exit the Vehicle/Shop Area in the basic flow.

### 2.2.3 Invalid Date Value

- 2.2.3.1 The system displays a feedback message that the "Date is invalid".
- 2.2.3.2 The system prompts the user to correct the date.
- 2.2.3.3 The user selects to correct the date and the use case returns to User Selects and Enters the Loss Information in the basic flow.



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## 2.2.4 European Branch Short List

2.2.4.1 The system retrieves and displays the European Branch short list. (NOTE: This list is comprised of all accounts that have an owning Group that equals the Group of the physical terminal location.) The columns displayed to the user are :

- Account Name
- Account Number
- Account Type
- Owning Group/Branch
- Address
- City
- State
- Zip
- Phone Numbers.

2.2.4.2 The user selects an account from the list that is displayed.

2.2.4.3 The use case continues at User selects Account from Branch Short List in the basic flow.

## 2.2.5 Search

2.2.5.1 The system displays an area with all the fields emptied out so that the user can enter search criteria. The fields that are available are:

- Group. This includes an "All Groups" option. For reservation pilot, group will be limited to the physical location's group only.
- Account Name
- Account Phone Number(s)
- Account Type. This includes an "All" option. (See Special Requirements for the list of valid Account Types)

2.2.5.2 The user enters an Account Name and selects "All" as the Account Type.

2.2.5.3 The user initiates the search.

2.2.5.4 The system validates the search criteria. (If only an account type is entered, the system will prompt the user that at least one other criterion must be selected. If only a group is chosen, the system will prompt the user that at least one other criterion must be selected.)

2.2.5.5 The system checks the status of the search. If No Account Matches are found, the use case continues at alternate flow No Account Matches.

2.2.5.6 The system displays the matches to the user in a summary list. The columns that are displayed to the user are: (from left to right)

- Account name
- Legacy Customer Number (called Account Number in ECARS 2.0)
- Account type
- Owning Group and Branch
- Address
- City
- State
- Zip
- Phone Number(s)

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#### 2.2.5.7 The user has the following options:

- Select an account from the summary list.
- Clear the search criteria.
- Search again.
- Exit.

2.2.5.8 If the user chooses to select an account from the summary list, the use case continues at System Displays Contacts in the basic flow. If the user chooses to clear the search criteria, the use case continues at the first step in alternate flow Search. If the user chooses to search again, the use case continues at the first step in alternate flow Search. If the user chooses to exit, the use case continues at System displays Branch Short List in the basic flow.

### 2.2.6 Enter a Legacy Customer Number

2.2.6.1 From the Basic Flow, the user chooses to enter a Legacy Customer Number.

2.2.6.2 The user types in a Legacy Customer Number and initiates a search for all the information associated with the entered Legacy Customer Number.

2.2.6.3 The system checks the status of the search. If No Account Matches are found, the use case continues at alternate flow No Account Matches. If More than one Account match is found, the use case continues at alternate flow More Than One Account Match. If the search results in only one match, the use case continues at System Displays Contacts in the basic flow.

### 2.2.7 No Account Matches

2.2.7.1 From the basic flow, the system displays a message to the user letting them know that No Account Matches or records were found.

2.2.7.2 The use case continues at System displays the Select Vehicle, Loss Information and Select Shop Areas in the Basic Flow.

### 2.2.8 More Than One Account Match

2.2.8.1 The system displays a summary list of the matches to the user. The columns that will be displayed in the summary list are (from left to right):

- Account name
- Legacy Customer Number
- Account type
- Address
- City
- State
- Zip
- Phone Number(s)

2.2.8.2 The user has the option to select an account from the list or to exit. If the user selects an Account from the list, the use case continues at System Displays Contacts in the basic flow. If the user chooses to exit the list without selecting an Account, the use case continues at System displays Branch Short List in the basic flow.

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## 2.2.9 Add Not on File Account

2.2.9.1 The system displays an area for the user to enter Account information for an account that is not on file. The fields that must be entered are:

- (Account) Name
- (Street) Address
- Zip
- Phone Number
- City
- State
- Zip
- Contact Last Name
- Contact First Name

2.2.9.2 The user enters the (Account) Name, (Street) Address, Zip/Postal Code and Phone Number.

2.2.9.3 The system displays the option to search for the City and State/Province based upon the Zip/Postal Code and Country.

2.2.9.4 The user selects the option and the system performs the search for the City and State/Province that match the Zip/Postal Code and Country.

2.2.9.5 The system produces a single City and State/Province result and continues at the next step in the basic flow. If the search produces no matching City and State/Province information, the use case continues at alternate flow No Match to Zip/Postal Code. If the search produces multiple cities the use case continues at alternate flow Multiple City Results.

2.2.9.6 The system populates the City and State/Province fields. The system also makes the information in these fields available for edit.

2.2.9.7 The system associates the Not on File account to the reservation/ticket and the use case continues at alternate flow Add New Contact. If the user chooses to exit, the use case continues at System Displays Contacts in the basic flow.

2.2.9.8 The system associates the new contact added to the Account chosen and the use case continues at User Selects to Exit the Vehicle/Shop Area in the basic flow.

## 2.2.10 No Match to Zip/Postal Code

2.2.10.1 The system displays a feedback message that the zip/postal code does not produce matching city and state/province information.

2.2.10.2 The system prompts the user to manually enter city and state/province information.

2.2.10.3 The user selects to manually enter city and state/province information and the use case proceeds back to 2.2.9.7 in the alternate flow Add Not on File Account.

## 2.2.11 Multiple City Results

2.2.11.1 The system displays a feedback message that the Zip/Postal code produces more than one matching city.

2.2.11.2 The system displays the list of cities and prompts the user to select a City.

2.2.11.3 The user selects a City from the list and the use case proceeds back to 2.2.9.7 in the alternate

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flow Add Not on File Account.

## **2.2.12 No Contacts**

2.2.12.1 From the basic flow, the system displays a message letting the user know that no contacts have been set up for this Account. (All Accounts have a listing of "Unknown" as a contact. The message will display when "Unknown" is the only contact present.)

2.2.12.2 The user can either:

- Add a new contact.
- Select a contact of "Unknown"
- 

2.2.12.3 If the user chooses to add a new contact, the use case continues at alternate flow Add New Contact. If the user selects a contact of "Unknown", the use case continues at User Selects to Exit the Vehicle/Shop Area in the Basic Flow.

## **2.2.13 Add New Contact**

2.2.13.1 From the basic flow, the system displays an area for the user to enter Contact information. The fields that must be entered are:

- Last Name
- And/or
- First Name

2.2.13.2 The user enters a first and/or last name and accepts the new contact information entered. If the user chooses to exit, the use case continues at System Displays Contacts in the basic flow.

2.2.13.3 The system associates the new contact added to the Account chosen and the use case continues at User Selects to Exit the Renter's Vehicle/Shop Area in the basic flow.

## **3. Special Requirements –Vehicle/Shop Use Case**

- 1) Year, Make and Model domain values come from the database.
- 2) The list of years that the renter's vehicle was manufactured will be listed in descending order.
- 3) The note entered into the Vehicle Notes field should be viewable from the Vehicle Notes section of the Vehicle/Shop screen. They WILL NOT be viewable from the Notes screen/use case..
- 4) A contact must be selected for every Account that is select as a Shop. NOTE: This is a not a requirement for a reservation only open ticket.
- 5) The valid Account Types that are displayed to the user in Search are:
  - o Body Shop
  - o Corporate
  - o Government
  - o Fleet
  - o Dealership
  - o Insurance
  - o Other
- 6) The Branch Short List is currently being generated from the existing Legacy system and is being stored in a table on the Oracle database.
- 7) The system should not search or display for any deactivated or deleted accounts.

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- 8) The user must have the ability to cancel a search at any time during the search.
- 9) The Navigation Bar for the Vehicle/Shop area should display the following:
  - a. Line 1: Year, Make and Model of the Renter's Vehicle
  - b. Line 2: Shop Account Name
- 10) Notes should be generated when any of the following events occur:

<u>The user adds a "Not on File" contact.</u>	Not on file contact "First Name Last Name" was added for Account "XXXXX"	Create/Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
<u>The user changes the shop account.</u>	Shop "XXXX" was changed to "XXXX".	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
<u>The user changes the type of loss.</u>	Type of loss "XXXX" was changed to "XXXX".	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
<u>The user changes the "Total Loss?"</u>	Total Loss "XXXX" was changed to "XXXX".	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
<u>The user changes the date of loss.</u>	Date of loss "XXXXXX" was changed to "XXXXXX".	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
<u>The user changes number of theft waiver days.</u>	Theft waiver days "X" was changed to "X"	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
<u>The user changes the renter's vehicle Year.</u>	The renter's vehicle Year "XXXX" was changed to Year "XXXX".	Edit	Edit	Vehicle/Shop
<u>The user changes the renter's vehicle Make.</u>	The renter's vehicle Make "XXXX" was changed to Make "XXXX"	Edit	Edit	Vehicle/Shop
<u>The user changes the renter's vehicle Model.</u>	The renter's vehicle Model "XXXX" was changed to Model "XXXX"	Edit	Edit	Vehicle/Shop
<u>The user changes the renter's vehicle Other Make text.</u>	The renter's vehicle other Make "XXXX" was changed to "XXXX"	Edit	Edit	Vehicle/Shop
<u>The user changes the renter's vehicle Other Model text.</u>	The renter's vehicle other Model "XXXX" was changed to "XXXX"	Edit	Edit	Vehicle/Shop
<u>The user changes the registration number of the renter's vehicle. (If the physical terminal location is in Europe.</u>	The renter's vehicle registration number was "XXXX" was changed to "XXXX".	Edit	Edit	Vehicle/Shop
<u>The user changes the class of the renter's vehicle. (If the physical terminal location is in Europe.)</u>	The renter's vehicle class "X" was changed to "X".	Edit	Edit	Vehicle/Shop

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#### Edit Reservation

#### Shop Area Fields

##### Account Name

If the account name is changed (to a valid account), account number will change appropriately and the contact name will now be "select".

##### Account Number

If the account number is changed, the account name will change appropriately and the contact name will now be "select".

##### Contact Name

There are no edit rules for open ticket on changing or deleting a contact name.

##### Phone Number

There are no edit rules for open ticket on changing or deleting a phone number.

#### Vehicle Area Fields

##### Year

There are no edit rules for open ticket on changing or deleting a Year.

##### Make

If a Make is changed or deleted, the Model field will be cleared.

##### Model

There are no edit rules for open ticket on changing or deleting a Model.

##### Other Make, Other Model, Other Color

There are no edit rules for open ticket on changing or deleting an Other Make, Other Model, Other Color.

#### Loss Information Area Fields

##### Is Car Drivable?, Type of Loss, Total Loss?, Date of Loss, and Theft Waiver Days

There are no edit rules for open ticket on changing or deleting Is Car Drivable?, Type of Loss, Total Loss?, Date of Loss, and Theft Waiver Days.

## 4. Pre-Conditions

- A user is authorized through a login process to create or edit a reservation or ticket.
- The user has accessed a reservation or ticket, either in the process of editing or creating.

## 5. Post-Conditions

## 6. Questions

## Rental Redesign/ECARS 2.0 Use Case Specification: Enter Renter's/ Additional Driver's Insurance Information

..1k 212121 222222 232323 242424 252525 262626 272727 282828 292929 303030 313131 323232 333333 343434 353535 363636 373737 383838 393939 404040 414141 424242 434343 444444 454545 464646 474747 484848 494949 505050 515151 525252 535353 545454 555555 565656 575757 585858 595959 606060 616161 626262 636363 646464 656565 666666 676767 686868 696969 707070 717171 727272 737373 747474 757575 767676 777777 787878 797979 808080 818181 828282 838383 848484 858585 868686 878787 888888 898989 909090 919191 929292 939393 949494 959595 969696 979797 989898 999999 1001001000

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## Revision History

Date	Version	Description	Author
05/21/2001	1.0	Initial Draft	David Beebe
06/01/2001	1.1	Revisions based upon feedback from user review with Jon and Mary. 1. Employee Number is no longer an entry field: the system populates this field based upon the user in the active session. 2. OK/Exit renamed to "Save" 3. Selection of the Save option does not provide a feedback message to make sure they want to do that. 4. Moved validation of date to after the "Save" step. <i>(In HTML, Date Validation occurs after form submittal.)</i>	David Beebe
06/26/2001	1.2	Added (Blank) as an option for the following fields: <ul style="list-style-type: none"> <li>Liability</li> <li>Assigned Risk</li> <li>Lienholder Policy</li> </ul>	Dave Beebe
06/28/2001	1.3	Revisions to match the Screen Action Spec document. 1. Removed the employee number gathered insurance information field. 2. Moved the insurance company employee that verified insurance information field. 3. Switched order of Comprehensive Deductible and Collision Deductible fields. 4. Removed Special Requirement that Employee Number field is available for edit.	David Beebe



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## Use Case Specification: Enter Renter's/Additional Driver's Insurance Information

### 1. Enter Renter's/Additional Driver's Insurance Information Use Case

#### 1.1 Brief Description

This use case will describe the interaction that occurs between a user and the system when the user inputs and selects details pertaining to the insurance information about a person who is a renter or additional driver.

### 2. Flow of Events

#### 2.1 Basic Flow

##### 2.1.1 Insurance Detail Area

The Enter Renter's/Additional Driver's Insurance Information Use Case begins when the system displays the area for entry and selection of insurance information about the person who is a renter or additional driver. The fields in this area are:

##### Information about the Insurance Company

- Carrier
- Agent
- Phone Number
- Name of Insurance Company Contact
- Policy Number
- Expiration Date

##### Information about the renter's or the additional driver's insurance

- Comprehensive Deductible
- Collision Deductible
- Liability?
  - (Blank)
  - Yes
  - No
- Assigned Risk?
  - (Blank)
  - Yes
  - No
- Lienholder Policy?
  - (Blank)
  - Yes
  - No

##### 2.1.2 Option to Cancel / Exit

The system displays the option for the user to Cancel/Exit. At any point during the entry of insurance information the user could decide to cancel out of the entry process at which time the use case would continue at alternate flow Cancel/ Exit.

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### 2.1.3 *Option to Save*

The system displays the option to Save. At any point during the entry of insurance information the user could decide to Save at which time the use case would continue at basic flow Save.

### 2.1.4 *Company and Insurance Detail Information Area Entry*

The user can enter information in the following fields: the name of the Carrier, the name of the Agent, Phone Number, Insurance Company Contact, Policy Number, Expiration Date, the Collision Deductible amount and the Comprehensive Deductible amount. The user can also select the available choices for Liability, Assigned Risk, and Lienholder Policy. There are no default values for any of the above fields.

### 2.1.5 *Select Save Option*

The user selects the option to Save.

### 2.1.6 *Validation of Date*

The system validates the value in the Expiration Date field. If the Date value is not valid because it does not exist (for example 02/30/02) the use case continues at alternate flow Invalid Date. If the Date value is not valid because the Expiration Date is prior to the current date the use case continues at alternate flow Expired Policy Date.

### 2.1.7 *Validation of Information Entry*

The system validates that if information is entered in any one of the following fields, that all of the other fields listed also have information entered in them:

- Carrier
- Insurance Company Contact
- Policy Number
- Expiration Date
- Collision Deductible
- Comprehensive Deductible
- Liability: Yes/No

If the system determines that any of the above fields are missing information, the system will present the user with a feedback message as to what fields are not filled to complete Insurance Information. The system will display the option for the user to proceed back to Company and Insurance Detail Information Area Entry in the basic flow to complete entry.

### 2.1.8 *Save*

The system saves all the information entered and selected in the fields of the of this use case flow. This would be:

- Carrier
- Agent
- Phone Number
- Insurance Company Contact
- Policy Number
- Expiration Date
- Comprehensive Deductible
- Collision Deductible
- Liability?: (Blank), Yes, No

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- Assigned Risk?: (Blank), Yes, No
- Lienholder Policy?: (Blank), Yes, No

#### 2.1.9 End

The Use Case ends.

### 2.2 Alternative Flows

#### 2.2.1 Cancel / Exit

2.2.1.1 The user selects the option to Cancel / Exit.

2.2.1.2 The system displays a feedback message warning that the insurance data will be lost if the user selects to Cancel / Exit.

2.2.1.3 The system displays the following options:

- Yes: to exit and lose data.
  - No: return to the use case.
- (The default option will be No: return to the use case.)

2.2.1.4 The user selects Yes the use case ends. If the user selects No, then continue in basic flow at the point where the user selected to Cancel / Exit.

#### 2.2.2 Invalid Date

2.2.2.1 The system displays a feedback message that the Date is invalid.

2.2.2.2 The system prompts the user to correct the Date that is invalid.

2.2.2.3 The user selects to correct the Date and the use case proceeds back to Company and Insurance Detail Information Area Entry in the basic flow.

#### 2.2.3 Expired Policy Date

2.2.3.1 The system displays a feedback message that the policy has expired.

2.2.3.2 The system prompts the user to :

- Correct the policy expiration date.
- Exit the Insurance Information Entry process.

2.2.3.3 If the user selects to change the expiration date the use case proceeds back to Company and Insurance Detail Information Area Entry in the basic flow. If the user selects to exit the open ticket process the use case continues at alternate flow Cancel / Exit.

### 3. Special Requirements

### 4. Pre-Conditions

- A user is already authorized through a login process to access the panel that is necessary to:
- Create or edit a reservation.

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- Open, edit or close a rental ticket.

## 5. Post-Conditions

## 6. Extension Points

## 7. Questions

**Question:** In the Employee Approval of the Renter's Insurance Information area should there be further security? (for example: update code). Or can the user just input the employee number and have the system save it as long as it is a valid employee?

**Answer:** No further security is needed. The employee number information will be automatically populated into the correct field. This field is display only and the information in it cannot be changed.

**Question:** What European requirements are there?

**Answer:** Jon Jouris has indicated there could be translations for the U.K., Germany etc. Fields could be eliminated or labels could be changed.

As of 06/06/2001 an electronic copy of this document had been sent to Jon Jouris so that he can pass it on to the appropriate European personnel for feedback.

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<Company Name>

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## ECARS 2.0 - Notes Information Screen Action Specification

ECARS 2.0 - Notes Information  
Screen Action Specification

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Supplementary Specification	Date: <dd/mmm/yy>
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## Revision History

Date	Version	Description	Author
07/09/2001	1.0	Created document	Marty Tichy
07/31/2001	1.1	Identified requirements and created hierarchies.	Johnny S. Johnston
08/31/2001	1.2	Updated to reflect changes from Navigation use case	James Atteberry
11/06/2001	1.3	Updated with new screen shot and removed the "Print Current Page" requirement.	Chris Carr
11/09/2001	1.4	Described German translation difference for 'ARMS Msg' column heading.	Chris Carr
11/20/2001	1.5	Notes text field in summary list is limited at 80, not 90, characters. Anything after that is represented by an ellipse (...).	Chris Carr
11/29/2001	1.6	Changed list of Callback types. Also changed when note is entered from type "callback" to "manual"	David Beebe

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## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Notes screen.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Reservation Notes Screens

Notes - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Reservation Contracts Callbacks

DRIVERS Notes - Options - Go

Driver summary 1  
Driver summary 2

REFERRAL

Referral sum 1  
Referral sum 2

DATES/RATES

Dates summary 1  
Dates summary 2

BILL-TO

Bill-To summary 1  
Bill-To summary 2

VEHICLE/SHOP

Vehicle/Shop 1  
Vehicle/Shop 2

NOTES

Notes summary 1  
Notes summary 2

Type: ALL Status: ALL

Date/Time	Note	Status	Note Type	Created By	ARMS Msg
07/03/2001 3:22PM	Car is at Joe's Garage	CLOSE	CALLBACK	ECARS 2.0 USER	
07/02/2001 2:22PM	Does not like red cars. This shows the first two lines of the notes section.(2 @ 45 char)...	OPEN	SYSTEM	SYSTEM	SENT
07/01/2001 1:22PM	Reservation Created	RESERVATION	SYSTEM	SYSTEM	SENT

Print All Records Add Note

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

keycode=9 Local intranet

Figure 1 – Notes

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The image shows a screenshot of a web browser window. The title bar reads "Add Note - Microsoft Internet Explorer pro...". The page content includes a header "Add Note" and a label "Note:" followed by a large, empty text input field. At the bottom of the window, there are two buttons: "OK" and "Cancel".

Figure 2 – Add Note

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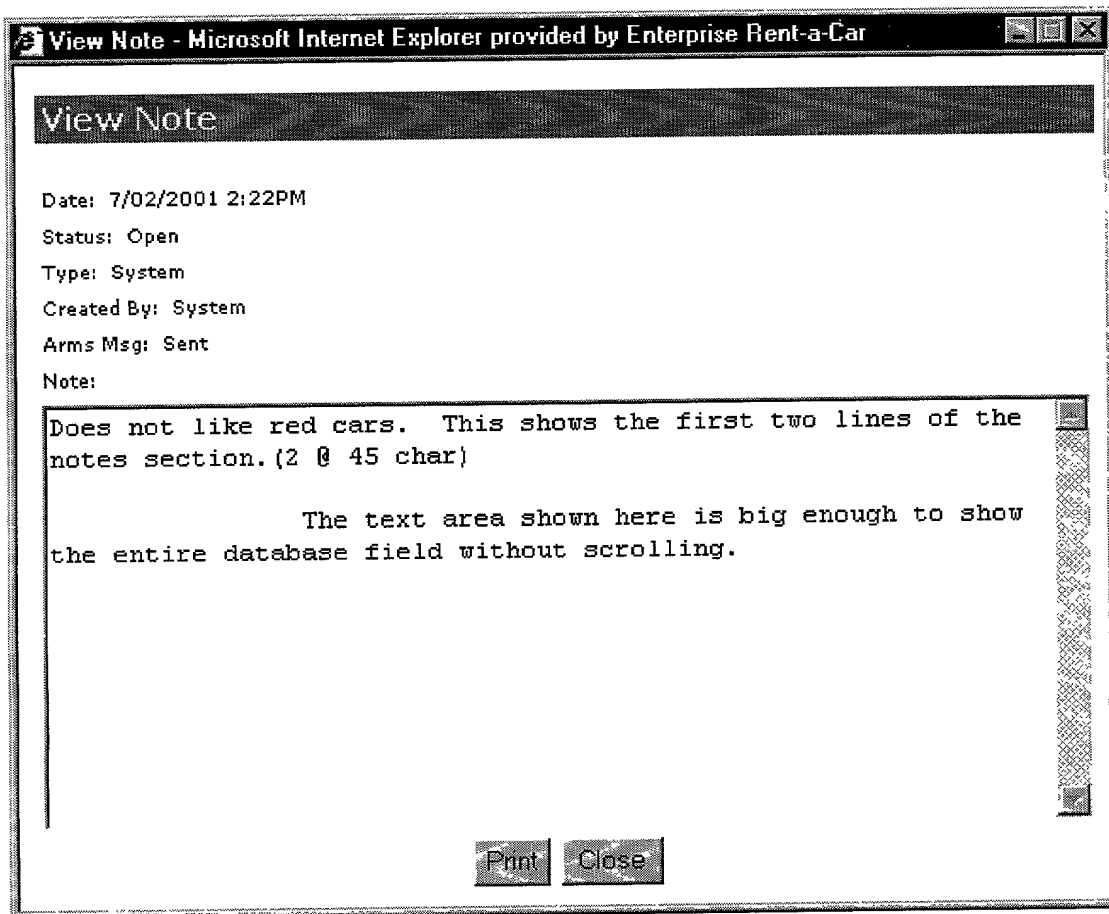


Figure 3 – View Note

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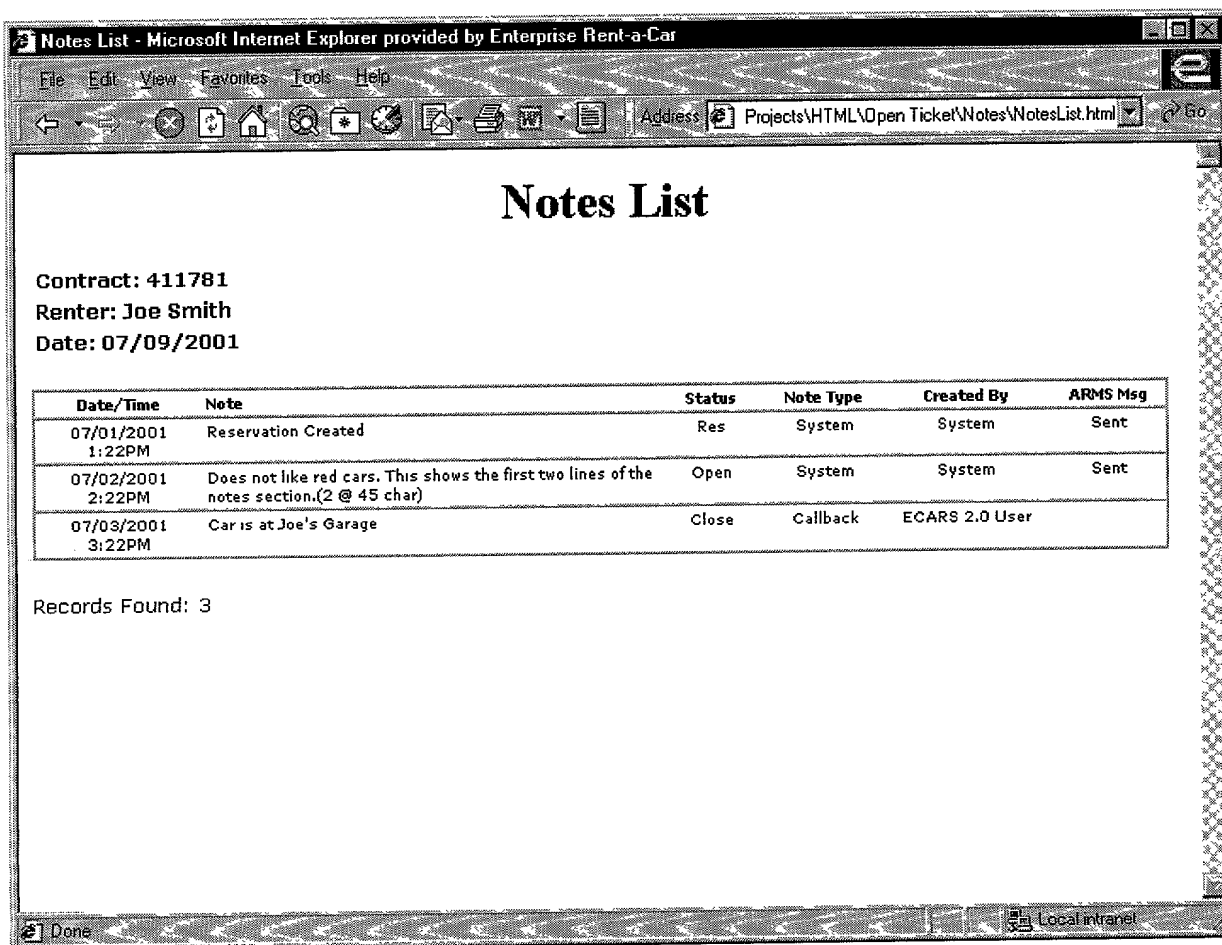


Figure 4 – Print All Records

### 3. Reservation Notes Screen

#### 3.1 Reservation Number

##### 3.1.1 Behavior

This area shows the unique reservation number that has been assigned to the newly created reservation. The reservation number is 6 alphanumeric characters long. If another reservation is open, its reservation number will be displayed in this area as well. The user will have the ability to have up to 3 reservations open at a time. A hyperlink will be available on the reservation numbers of the reservations that are NOT currently being displayed. For the reservation that is currently displayed, the reservation number will not have a hyperlink available. This is to allow the user to navigate between the open reservations.

##### 3.1.2 Validation

None identified at this time.

##### 3.1.3 Business Exceptions

If the user tries to open a 4<sup>th</sup> reservation, the system will display a message stating, "A maximum of 3 reservations may be displayed."

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#### 3.1.4 *Systems Exceptions*

None identified at this time.

### 3.2 Notes Title Bar Area

#### 3.2.1 Behavior

The open area in the Notes Title Bar will allow the user to access transaction-wide functions. These functions for Reservation are: -- Options --, Print, Void and Transfer. The default option is "--Options --". The user must press the Go button to initiate the selected function.

The Title Bar Button area in the Notes Title Bar contains two buttons -- a Go button and a Close button.

The Go button is always active, and is used to initiate a function selected in the Options area. If the selected option is "--Options --", nothing should happen.

The Close button is always active, and is used to close the current transaction. The button is labeled with an 'X'. Pressing this button will cause a confirmation popup, asking the user if they wish to cancel the transaction and lose all changes. If the user selects 'No', they are returned to the same screen. If the user selects 'Yes', the transaction is closed with no changes saved to the database.

#### 3.2.2 *Validation*

None identified at this time.

#### 3.2.3 *Business Exceptions*

None identified at this time.

#### 3.2.4 *System Exceptions*

None identified at this time.

### 3.3 Button Line Area

#### 3.3.1 Behavior

The Previous button will take the user to the Notes screen within the same transaction.

The Next button will take the user to the Referral screen within the same transaction.

The Complete button will initiate a save of the transaction. All validations will be performed, returning any errors to the user. If there are no errors, the transaction will be saved, and the user is returned to the Reservation Home Page.

#### 3.3.2 *Validations*

None identified at this time.

#### 3.3.3 *Business Exceptions*

None identified at this time.

#### 3.3.4 *System Exceptions*

None identified at this time.

### 3.4 Type

#### 3.4.1 Behavior

This is a drop down field containing the following domain values:

- All

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- Bill To
- Callback
- Manual
- Renter
- Reservation
- Shop
- System

The default value is "All". The summary list is filtered by the item selected from the values list. The Status drop down list should be taken into consideration when filtering the summary list.

### 3.4.2 *Validation*

No validation is necessary.

### 3.4.3 *Business Exceptions*

None have been identified at this time.

### 3.4.4 *System Exceptions*

None have been identified at this time.

## 3.5 Status

### 3.5.1 Behavior

This is a drop down field containing the following domain values;

- All
- Reservation
- Open
- Close

The default value is "All". The summary list is filtered by the item selected from the values list. The Type drop down list should be taken into consideration when filtering the summary list.

### 3.5.2 *Validation*

No validation is necessary.

### 3.5.3 *Business Exceptions*

None have been identified at this time.

### 3.5.4 *System Exceptions*

None have been identified at this time.

## 3.6 Summary List

### 3.6.1 Behavior

The result list, as describe in the use case, will have a static column display sequence. All columns need to have the capability to be sorted, ascending and descending. The user selects a Contract by clicking on the hyperlink associated with the desired data row. The summary list will be populated with the latest note appearing first and the earliest note appearing last (descending order sorted by date/time).

An ellipse (...) should be placed at the end of the note text field if the verbiage contained in the note exceeds 80 characters.

The user must have the appropriate security to view/edit the contract selected.

<Project Name>	Version: <1.5>
Supplementary Specification	Date: <dd/mmm/yy>
<document identifier>	

This list contains the application standard for lists regarding sorting by column.  
The 'ARMS Msg' column header does not directly translate for Germany; rather, it is 'ARMS'.

### 3.6.2 *Validation*

None have been identified at this time.

### 3.6.3 *Business Exceptions*

None have been identified at this time.

### 3.6.4 *System Exceptions*

None have been identified at this time.

## 3.7 Button Line Area

### 3.7.1 Print All Records button

#### 3.7.1.1 Behavior

The Print All Records button will essentially generate an html report and send it to the printer. This will allow the user to print the entire collection of notes associated with a contract. This report will not be sent to the screen, it will only be sent to the printer.

#### 3.7.1.2 *Validation*

No validation is necessary.

#### 3.7.1.3 *Business Exceptions*

None have been identified at this time.

#### 3.7.1.4 *System Exceptions*

None have been identified at this time.

### 3.7.2 Add Note button

#### 3.7.2.1 Behavior

The Add Note button will display the Add Note screen for data input.

#### 3.7.2.2 *Validation*

No validation is necessary.

#### 3.7.2.3 *Business Exceptions*

None have been identified at this time.

#### 3.7.2.4 *System Exceptions*

None have been identified at this time.

## 4. Add Note Screen

### 4.1 Note

#### 4.1.1 Behavior

This is a free form text field in which the user may enter data.



<Project Name>	Version: <1.5>
Supplementary Specification	Date: <dd/mmm/yy>
<document identifier>	

#### 4.1.2 Validation

There must be data present in order for the note to be saved.

#### 4.1.3 Business Exceptions

None have been identified at this time.

#### 4.1.4 System Exceptions

None have been identified at this time.

### 4.2 Button Line Area – Add Note

#### 4.2.1 OK button

##### 4.2.1.1 Behavior

If data is not present in the Notes text field the feedback message reads, “Please enter a Note if selecting to Save.” Two options are presented, OK and Cancel. Ok will take the user back to the Add Note screen for data entry, Cancel will dismiss the Add Note screen.

Ok will be the default selection.

The application saves the Date/Time, Status, Type, Note text and Created By data at the time the note is committed to the database.

Type = Manual

Status = contract status as of note creation

##### 4.2.1.2 Validation

There must be data present in the Notes text field.

##### 4.2.1.3 Business Exceptions

None have been identified at this time.

##### 4.2.1.4 System Exceptions

None have been identified at this time.

#### 4.2.2 Cancel button

##### 4.2.2.1 Behavior

This button will dismiss the Add Note screen without saving any data.

##### 4.2.2.2 Validation

If data has been entered the following feedback message is displayed; “Are you sure you want to exit and lose the entered information?”. Two options are presented, Yes and No. Yes will dismiss the screen and not save the data, No will take the user back to the Add Note screen.

The default button selection is “No”.

##### 4.2.2.3 Business Exceptions

None have been identified at this time.

##### 4.2.2.4 System Exceptions

None have been identified at this time.

<Project Name>	Version: <1.5>
Supplementary Specification	Date: <dd/mmm/yy>
<document identifier>	

## 5. View Note Screen

This is a read only screen.

### 5.1 Data

#### 5.1.1 Behavior

This is a listing of the values associated with the selected note, this includes;

- Date/Time
- Status
- Type
- Created By
- Arms Message Status
- Note text

The Note text field should be large enough to display the entire 510 characters as defined in the database.

#### 5.1.2 Validation

No validation is necessary.

#### 5.1.3 Business Exceptions

None have been identified at this time.

#### 5.1.4 System Exceptions

None have been identified at this time.

## 5.2 Button Line Area – View Note

### 5.2.1 Print button

#### 5.2.1.1 Behavior

This button will essentially print a screen print of the View Note screen.

#### 5.2.1.2 Validation

There must be data present in the Notes text field.

#### 5.2.1.3 Business Exceptions

None have been identified at this time.

#### 5.2.1.4 System Exceptions

None have been identified at this time.

### 5.2.2 Close button

#### 5.2.2.1 Behavior

This button will dismiss the View Note screen.

#### 5.2.2.2 Validation

None have been identified at this time.

#### 5.2.2.3 Business Exceptions

None have been identified at this time.

<Project Name>	Version: <1.5>
Supplementary Specification	Date: <dd/mmm/yy>
<document identifier>	

#### 5.2.2.4 System Exceptions

None have been identified at this time.

## 6. Rules

### 6.1 Required Fields

The Note text field is required for creating a note. Feedback messages will be presented, as defined previously in this document, when attempting to save a note without the required information.

### 6.2 Saving

A note must be defined before the data can be saved to the database.

## 7. Security

The user must have the appropriate security level to access this screen.

# ECARS 2.0 - Open Ticket Search Screen Action Specification

[illegible]

	Version: <1.0>
ECARS 2	Date: <dd/mm/yy>
<document identifier>	

## Revision History

Date	Version	Description	Author
04/12/2001	1.0	Created Template	Marty Tichy
04/16/2001	2.0	Created document	Marty Tichy
04/18/2001	2.1	Modified Account Name/Number search capability to limit it to Bill-To/Shop, changed verbiage on screen shots as well.	Marty Tichy
04/19/2001	2.2	Removed the items that were added in 2.1	Marty Tichy
05/08/2001	2.3	Added field disabling/enabling subsequent to search invocation logic	Marty Tichy
05/14/2001	2.4	Modified field behavior subsequent to search invocation logic	Marty Tichy
06/12/2001	2.5	Replaced screen shots.	Marty Tichy

	Version: <1.0>
ECARS 2	Date: <dd/mm/yy>
<document identifier>	

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	Version: <1.0>
ECARS 2	Date: <dd/mmm/yy>
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Enterprise ECARS Application - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Reservation Contracts Callbacks Rates Tools Help ARMS

### Open Ticket Search

Group:  Branch:  [Advanced Search](#)

Ticket Number:  Renter Last Name:  Renter First Name:  Renter Telephone Number:

CR/BR	Renter Name	Phone #	Unit #	RD/PO/Claim #	Unit Plate #	Open Date	Bill-To/Shop	Ticket #
0101	AQUILINO, BEATRICE	2022543525		30622C8G6WXH3WSSURLZY04		02/03/2001	ALLSTATE INS-ST. LOUIS**	3HXW6G
0101	AQUILINO, BEATRICE	2022543525		30622C8G6WXH3WSSURLZY04		02/03/2001	ALLSTATE INS-ST. LOUIS**	3HXW6H
0101	AQUILINO, BEATRICE	2022543525		30622C8G6WXH3WSSURLZY04		02/03/2001	ALLSTATE INS-ST. LOUIS**	3HXW6I

Items 1 - 3 of 3 found

First Prev 1 Next Last

Figure 2 - Simple Search with Search Results



ECARS 2	Version: <1.0>
<document identifier>	Date: <dd/mmm/yy>

Enterprise ECARS Application - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Reservation Contracts Callbacks Rates Tools Help ARMS

### Open Ticket Search

Group: [01 - ST LOUIS] Branch: [LADUE RENTAL 0101] [Simple Search](#)

Ticket Number: [ ] Renter Last Name: [A] Renter First Name: [ ] Renter Telephone Number: [ ]

RO/PO/Claim Number: [ ] Unit Number: [ ] Unit Plate Number: [ ] Open Ticket Date: [ ]

☒ Bill-To/Shop Name ☐ Bill-To/Shop Number [ ]

[Search](#) [Clear](#)

GRVBR	Renter Name	Phone #	Unit #	RO/PO/Claim #	Unit Plate #	Open Date	Bill-To/Shop	Ticket #
0101	AQUILINO, BEATRICE	2022543525	30622C8G6WXH3WSSURLZY04			02/03/2001	ALLSTATE INS-ST. LOUIS**	3HXW6G
0101	AQUILINO, BEATRICE	2022543525	30622C8G6WXH3WSSURLZY04			02/03/2001	ALLSTATE INS-ST. LOUIS**	3HXW6H
0101	AQUILINO, BEATRICE	2022543525	30622C8G6WXH3WSSURLZY04			02/03/2001	ALLSTATE INS-ST. LOUIS**	3HXW6I

Items 1 - 3 of 3 found

First Prev 1 Next Last

Figure 4 - Advanced Search with Search Results

-1			July 2001				+1		
mon							mon		
Sun	Mon	Tue	Wed	Thu	Fri	Sat			
1	2	3	4	5	6	7			
8	9	10	11	12	13	14			
15	16	17	18	19	20	21			
22	23	24	25	26	27	28			
29	30	31							

Figure 5 - Calendar selection

### 3. Group

#### 3.1 Behavior

This search criterion will be limited to active rental groups. The selection of "All" is also included, and will appear at the top, or first, in the list. This search criteria area will be a drop-down box. The users would also like to have the ability to type a character, alpha or numeric, into the criteria area and have the drop down list position to the character. (If the user enters an "H" the drop down list would position to the first string beginning with "H" in the list) The default item should be the group associated to the terminal locale.

	Version: <1.0>
ECARS 2	Date: <dd/mmm/yy>
<document identifier>	

### 3.2 Validation

The items appearing in the list are static; the user cannot add items to the list dynamically.

### 3.3 Business Exceptions

The user should not be allowed to view or select a group outside of security parameters.

### 3.4 System Exceptions

None identified at this time.

## 4. Branch

### 4.1 Behavior

This search criterion will be limited to active branches. The selection of "All" is also included, and will appear at the top, or first, in the list. This search criteria area will be a drop-down box. The users would also like to have the ability to type a character, alpha or numeric, into the criteria area and have the drop down list position to the character. (If the user enters an "H" the drop down list would position to the first string beginning with "H" in the list)

The default item should be the branch associated to the terminal locale. Branch items appearing in the list will be limited to the Group item selected. Once the selected Group item has changed, the first item (All) will be the default selection item.

### 4.2 Validation

The items appearing in the list are static; the user cannot add items to the list dynamically.

### 4.3 Business Exceptions

The user should not be allowed to view or select a branch outside of security parameters.

### 4.4 System Exceptions

None identified at this time.

## 5. Ticket Number

### 5.1 Behavior

This search area will be an alphanumeric field. It will return exact matches for the characters entered. When this search criterion is used, any other entered criteria will be ignored by the system. Alphanumeric values will be accepted into this field.

### 5.2 Validation

None identified at this time.

### 5.3 Business Exceptions

None identified at this time.

### 5.4 System Exceptions

None identified at this time.

## 6. Renter Name Last / First

### 6.1 Behavior

This search criteria area will be an text field containing an implied wildcard after the entered criteria. The First Name field will not be enabled until search criteria has been entered into the Last Name field. Thus,

	Version: <1.0>
ECARS 2	Date: <dd/mm/yy>
<document identifier>	

the First Name field will not be accessible via either the tab key or the mouse unless Last Name data is present.

It should be noted that either **Last Name** or **Last Name and First Name** used in combination, is considered to be just one search criteria.

It will return exact matches for the characters entered and will continue with other text strings that match the characters entered, but are of a longer length (an implied wildcard). Example: If the **Last Name** search criteria entered were "Smith", you would receive back every open ticket with "Smith" in the Last name. You would also receive every character string that matched "Smith" for the first 5 characters, but was longer than five characters. Given this, you would also receive, "Smither", "Smithson", "Smithy", etc. These longer character matches would be alphabetically ascending after the exact character matches of equal length. The First Name field behaves in the same manner.

## 6.2 Validation

None identified at this time.

## 6.3 Business Exceptions

None identified at this time.

## 6.4 System Exceptions

None identified at this time.

# 7. Renter Telephone Number

## 7.1 Behavior

This search criteria area will be an alphanumeric field. It will not be formatted for presentation purposes. Returns exact matches for the characters entered. A phone number is considered to be the entire number including area code. Example: In the United States, it would be the 3 digit area code, plus the seven digit phone number. (Country Code is not considered a part of the phone number.) The search will be on all phone number fields associated with the Driver/Renter. Currently, these are Home, Office and Other.

## 7.2 Validation

None identified at this time.

## 7.3 Business Exceptions

None identified at this time.

## 7.4 System Exceptions

None identified at this time.

# 8. RO/PO/Claim Number

## 8.1 Behavior

This search criteria area will be an alphanumeric field. Returns exact matches for the characters entered.

## 8.2 Validation

None identified at this time.

## 8.3 Business Exceptions

None identified at this time.

Version: <1.0>	
ECARS 2	Date: <dd/mmm/yy>
<document identifier>	

#### 8.4 System Exceptions

None identified at this time.

### 9. Unit Number

#### 9.1 Behavior

This search criteria area will be an alphanumeric field.  
Returns exact matches for the characters entered .

#### 9.2 Validation

None identified at this time.

#### 9.3 Business Exceptions

None identified at this time.

#### 9.4 System Exceptions

None identified at this time.

### 10. Open Ticket Date

#### 10.1 Behavior

Only numeric values will be accepted into these areas. The search to the database will be an exact numeric, time stamp match . Associated with this field, is a calendar function that allows the user to select a date from a calendar screen, or similar feature, instead of entering a value (Figure 5 - Calendar selection). Clicking on the calendar icon will display the screen, once a date is selected from the screen the Open Ticket Date field will be populated with the appropriate date.

Returns exact matches for the characters entered. It will not be formatted for presentation purposes. The user may enter delineating characters, but these will be stripped out before searching the database to find an exact date match.

#### 10.2 Validation

None identified at this time.

#### 10.3 Business Exceptions

None identified at this time.

#### 10.4 System Exceptions

None identified at this time.

### 11. Unit Plate Number

#### 11.1 Behavior

This search criteria area will be an alphanumeric field.  
Returns exact matches for the characters entered.

#### 11.2 Validation

None identified at this time.

#### 11.3 Business Exceptions

None identified at this time.

	Version: <1.0>
ECARS 2	Date: <dd/mmm/yy>
<document identifier>	

#### 11.4 System Exceptions

None identified at this time.

### 12. Bill-To/Shop Name/Number Group

This group of controls includes the Bill-To/Shop Name and the Bill-To/Shop Number radio buttons as well as a criteria text box.

#### 12.1 Behavior

This search criteria area will be an alphanumeric field regarding the text field. The Bill-To/Shop Name radio button will be the default selection upon screen entry .

When the Bill-To/Shop Name radio button is selected an implied wildcard will be added at the end of the entered search criteria. Example: If the **Bill-To/Shop Name** search criteria entered were "Smith", you would receive back every open ticket with "Smith" in the Bill-To/Shop name. You would also receive every character string that matched "Smith" for the first 5 characters, but was longer than five characters. Given this, you would also receive, "Smither", "Smithson", "Smithy", etc. These longer character matches would be alphabetically ascending after the exact character matches of equal length.

When the Bill-To/Shop Number radio button is selected it returns exact matches for the characters entered.

An entry into this field will search the Bill-To and Shop roles that an account (customer) may be and return all matches. Currently, the roles to which the search may be applied are "Shop" and "Bill-To".

#### 12.2 Validation

None identified at this time.

#### 12.3 Business Exceptions

None identified at this time.

#### 12.4 System Exceptions

Only one radio button can be selected at a given time.

### 13. Search Results Area

#### 13.1 Behavior

The result list will have a static column display sequence . All columns need to have the capability to be sorted, ascending and descending . The user selects an Open Ticket by clicking on the hyperlink associated with the desired data row.

The user must have the appropriate security to view/edit the open ticket selected.

#### 13.2 Validation

None identified at this time.

#### 13.3 Business Exceptions

None identified at this time.

#### 13.4 System Exceptions

None identified at this time.

	Version: <1.0>
ECARS 2	Date: <dd/mmm/yy>
<document identifier>	

## 14. Advanced Search / Simple Search hyperlink

### 14.1 Behavior

By clicking on the Advanced Search hyperlink, the user is presented with the advanced search functionality (Figure 3 - Advanced Search). Alternatively, by clicking on the Simple Search hyperlink, the user is presented with the default search screen (Figure 1 - Initial Entry – Simple Search). Any search criteria entered when on the default search screen will be passed to the Advanced Search screen if/when accessed . If the user navigates to the Simple Search screen from the Advanced Search screen, any search criteria entered into the advanced criterion that is not found on simple search will be lost.

### 14.2 Validation

None identified at this time.

### 14.3 Business Exceptions

None identified at this time.

### 14.4 System Exceptions

None identified at this time.

## 15. Results Feedback Line Area

### 15.1 Behavior

This feedback area provides the user with the search result list count as well as list navigation. The user may select the block of records available as returned by the invoked search criteria. These blocks are identified by sequential numbers, along with a First (1<sup>st</sup> block of records) and Last (last block of records). Also appearing will be the Prev and Next. When negotiating through the result list the sequential numbers will change depending upon the block of records being viewed, other blocks of records can be accessed via the Prev and Next hyperlinks. For example looking at the Figure 2 - Simple Search with Search Results if the user selected Next, the sequential numbers listed will range from 2-6. If the user wishes to return to record block 1, they can either select First or Prev to view record blocks 1-5 again.

### 15.2 Validation

None identified at this time.

### 15.3 Business Exceptions

None identified at this time.

### 15.4 System Exceptions

None identified at this time.

## 16. Button Line Area

### 16.1 Behavior

The Search image/button will invoke the search process, submitting the form to the server. The search can be invoked by clicking on the button or the user using the enter key.



	Version: <1.0>
ECARS 2	Date: <dd/mmm/yy>
<document identifier>	

The Reset control will return the screen to its default state. The default state being search criteria controls blank, group/branch default to terminal locale and an empty result area.

The system should determine that no more than the set limit of three search criteria have been entered.

## 16.2 Validation

None identified at this time.

## 16.3 Business Exceptions

A limit of three search criteria may be entered.

If Ticket Number is entered, all other search criteria are ignored .

## 16.4 System Exceptions

If more than three search criteria are entered the user should be presented with a feedback message stating "A limit of three search criteria may be entered, Please refine your search."

## 17. Rules

The Renter Name Last / First and Account Name search criteria have an implied wild card character placed directly after the entered text, all other search criteria fields on this screen are to be treated as exact matches with searching.

The user may invoke the search without changing or adding any search criteria to the default screen entry criteria. The user may increase the scope of the search by selecting all groups and/or all branches, no detailed search criteria is necessary when using this screen.

There is a limit of three search criteria on which a search may be executed. This does not include the Group and Branch selections. If more than three are entered the system will present to the user an appropriate feedback message stating that a maximum of three search criteria may be entered. This message will be displayed a form submittal.

When there are not any matches to the input search criteria the user should be presented with a feedback message stating no items were found. This text should appear in the 0 listed below.

- 1) If the search returns more open tickets than can be displayed on the screen at one time, then the system needs to present to the user the range of records they are viewing out of the total number of records

All of the following search criteria, EXCEPT Ticket Number, will be limited to, or constrained by, the Group and Branch indicated or selected.

## 18. Security

The user must have the appropriate security level to access this screen.

### Version <1.0>

	Version: <1.0>
ECARS 2	Date: 12/4/2001

## Revision History

Date	Version	Description	Author
12/04/2001	1.0	Created document	Marty Tichy

12/04/2001 12:00 PM Marty Tichy Created document

	Version: <1.0>
ECARS 2	Date: 12/4/2001

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## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Open Ticket without Payment Use Case. This document also extends the screen action specification documents associated with the reservation iteration, which includes the following screens:

- Driver
- Additional Driver
- Other Address
- Insurance Detail
- Cash Qualification
- Referral
- Bill-To
- Vehicle / Shop
- Dates / Rates
- Notes
- Application Locking

The user enters the new ticket process via the menu Tickets:New. This process behaves in the same manner as the previously defined Reservation process, opening a new record as an open ticket rather than a reservation.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

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## 2. Screen Prints

E3846G 0101 Enterprise ECARS Application - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

Reservation Tickets Callbacks Vehicle Tools Help

DRIVERS Driver - Options - Add Drivers

REFERRAL Driver Other Address Insurance Detail Cash Qualification

DATES/RATES Clear

BILL-TO

VEHICLE/SHOP

NOTES Notes Taken : 1

Tkt -139VC2

Driver Name and Address

Last Name: \* First Name: \*

Phone Numbers Home: Work: Extension:

Home Address Address: \* ZIP: \* Country: \* City: \* State: \*

Employer: Other Phone and Type:

Drivers License License Number: \* Expiration Date: \* Issuing Country: \* State Issued: \* SSN: \* Date of Birth: \* Eye Color: \* Height: \* Hair Color: \* Weight: \*

Primary Payment Method:

Next Complete

Figure 1 - Driver

**DRIVERS** | **Driver** | **Options** | **Go**

Additional Drivers: 1 | **Renter** | **Driver** | **Add Drivers**

**REFERRAL** | **Driver** | **Other Address** | **Insurance Detail** | **Cash Qualification**

**DATES/RATES** | **Clear** | **Delete**

**BILL-TO**

**VEHICLE/SHOP**

**NOTES** | Notes Taken : 1

**Driver Name and Address**

Last Name: \* | First Name: \*

Phone Numbers | Home Address

Home: | ☐ Same as Renter

Work: | Extension: | Address:

Employer: | ZIP: | Country: | UNITED STAT

Other Phone and Type: | City: | State: |

Credit Card Number | Credit Card First Name | Credit Card Last Name

Credit Card Type | CC Expiration Date

**Drivers License**

License Number: | Expiration Date: |

Issuing Country: | State Issued: | UNITED STAT |

SSN: | Date of Birth: \* |

Eye Color: | Height: |

Hair Color: | Weight: |

Tkt -139VC2 | **Next** | **Complete**

Figure 2 – Additional Driver

**Complete -- Web Page Dialog**

**Complete**

☒ Complete

☐ Complete - Unit Pend

☐ Complete - Pre-Write

**OK** | **Cancel**

Figure 3 - Complete

### 3. Driver

#### 3.1 Driver

##### 3.1.1 Behavior

This screen primarily behaves in the same manner as in Reservation. The following fields are required for this process:

- Last Name

ECARS 2	12/20/2001
---------	------------

- First Name
- Address
- Zip
- Country
- City
- State
- License Number
- Expiration Date
- State Issued
- Date of Birth
- Social Security Number
- Height
- Eye Color
- Weight
- Hair Color

All conditionally required fields and behaviors defined during the Reservation iteration apply

### 3.1.2 Validation

No validation is necessary.

### 3.1.3 Business Exceptions

None have been identified at this time.

### 3.1.4 System Exceptions

None have been identified at this time.

## 4. Additional Driver

### 4.1 Additional Driver

#### 4.1.1 Behavior

This screen primarily behaves in the same manner as in Reservation. The following fields are required for this process:

- Last Name
- First Name
- Date of Birth

The following fields are conditionally required for this process:

- If License Number is entered then
  - State Issued
  - Expiration Date (Drivers License section)
- If Address is entered then
  - Last Name
  - First Name
  - Zip



ECARS 2	12/20/2001
---------	------------

- Country
- City
- State

All conditionally required fields and behaviors defined during the Reservation iteration apply.

#### 4.1.2 Validation

No validation is necessary.

#### 4.1.3 Business Exceptions

None have been identified at this time.

#### 4.1.4 System Exceptions

None have been identified at this time.

### 5. Complete

The complete process primarily behaves in the same manner as that defined in the Reservation iteration with the exception of the items listed below. This includes confirmation dialogs and validations.

#### 5.1 Form

##### 5.1.1 Behavior

Only one selection can be made. The default selection will be "Complete".

The OK button will invoke the validation and save process.

The Cancel button will dismiss the form, placing the user back to where they invoked the process.

##### 5.1.2 Validation

Complete - When this option is selected all validations are invoked. This includes the required fields defined in the Driver and Additional Driver sections above as well as those conditionally required fields and validations defined in the Reservation iteration. During this iteration of the Open Ticket project a ticket will cannot be saved in this status due to the missing Unit Pend data described below. Thus during this iteration a ticket can be saved in Complete - Pre-Write or Complete - Unit-Pend status only.

Complete - Unit-Pend - When this option is selected all validations except those involving an assigned unit are invoked. This includes Unit Number and License Plate Number which currently do not exist in the screens being used, these will be added to the Dates/Rates screen in future iterations of the Open Ticket project.

Complete - Pre-Write - When this option is selected the Drivers Last and First names along with the Billing Cycle from the Dates/Rates screen and only those validations that are conditional required information are invoked. These sets of validations are primarily defined in the Reservation use cases.

If the user selects to save a ticket and it fails the necessary validation, the system will provide a feedback message listing the offending items. The user will then be allowed to save the ticket in a "lesser" open ticket status via the "Complete" button.

##### 5.1.3 Business Exceptions

None have been identified at this time.

##### 5.1.4 System Exceptions

None have been identified at this time.

ECARS 2	12/20/2001
---------	------------

## 6. Rules

### 6.1 Required Fields

Since this document is an extension of the screen action specification document defined in the Reservation and Open Ticket projects, the required fields and conditionally required fields along with all of the associated validations pertain to this document as well.

### 6.2 Saving

The save is completed when the user saves the ticket. When the ticket saves successfully the application will navigate to the Ticket Search screen.

## 7. Security

The user must have the appropriate security level to access the screens.

## ECARS 2.0 - Open Ticket Retrieve Rates Screen Action Specification

Year	Country	Population (millions)	Urban population (millions)	Urban population (%)	Population density (per sq km)	Urban population density (per sq km)
1970	United States	205	115	56	31	115
1970	France	45	25	56	210	350
1970	Germany	43	25	58	230	380
1970	Japan	125	85	68	330	550
1970	Italy	55	35	64	280	450
1970	Sweden	9	5	56	180	280
1970	Canada	22	12	55	30	100
1970	Australia	12	6	50	15	50
1970	South Africa	15	8	53	35	120
1970	Spain	35	15	43	80	150
1970	Belgium	10	6	60	350	550
1970	Netherlands	16	10	63	380	600
1970	Switzerland	3	2	67	180	280
1970	Austria	8	5	63	120	180
1970	Denmark	5	3	60	130	200
1970	Norway	3	1	33	20	60
1970	Finland	4	2	50	100	150
1970	Ireland	2	1	50	100	150
1970	Portugal	10	5	50	80	150
1970	Greece	10	5	50	80	150
1970	Turkey	25	10	40	50	100
1970	India	450	150	33	150	250
1970	China	850	250	30	120	200
1970	USSR	240	100	42	80	150
1970	Poland	35	15	43	120	200
1970	Czechoslovakia	15	7	47	180	300
1970	Yugoslavia	20	10	50	100	150
1970	Romania	22	10	45	100	150
1970	Bulgaria	10	5	50	100	150
1970	Hungary	10	5	50	100	150
1970	Soviet Union	240	100	42	80	150
1970	East Germany	18	9	50	100	150
1970	West Germany	18	9	50	100	150
1970	France	45	25	56	210	350
1970	Italy	55	35	64	280	450
1970	Japan	125	85	68	330	550
1970	United States	205	115	56	31	115

---

# Enterprise Rent-A-Car

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## Revision History

Date	Version	Description	Author
9/20/2001	1.0	Created Document	Johnny S. Johnston
10/10/2001	1.1	Revisions after second prototype meeting	Johnny S. Johnston

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# Enterprise Rent-A-Car

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# Enterprise Rent-A-Car

## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Open Ticket Retrieve Rate(s) screens.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Open Ticket Retrieve Rates - Screens

**Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car**

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss

Address: file:///Y:/APPS/Ecars\_20/Development/20%20Projects/HTML/Open%20Ticket/Rates/Rates.html#RateSource Go

Links: Customize Links Free Hotmail Windows STtoday news - special report

Reservation Contracts Callbacks

**Rates/Rates** - Options - Go

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATE/TIME**

Pickup Date: 10/04/2001 Time: 9:00 AM  
Return Date: 10/08/2001 Time: 3:00 PM

Start Charges if Different Change Return Information

**DATES/RATES**

Dates summary 1: 10/04/2001 9:00 AM  
Dates summary 2: DROP Elco Chevrolet

**BILL-TO**

Rate Source: Account Name: Account Number: Account Search  
Bill-To summary 1: -Select-  
Bill-To summary 2: -Select-

**VEHICLE/SHOP**

Vehicle/Shop 1: -Select- Rental Type: Billing Cycle:  
Vehicle/Shop 2: -Select-

**NOTES**

Unit Information: Vehicle Preferences

Notes summary 1  
Notes summary 2

Unit # License Plate # Last 6 of VIN Units Available

2000 Chevrolet Impala ICAR

Previous Next Complete

Res - 411781 Tkt - 234567 cbk - 363221

Keycode=44 Local intranet

Top portion of Rates panel

# Enterprise Rent-A-Car

Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

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Address file:///N:/APPS/Ecars\_20/Development%20%20Projects/HTML/Open%20Ticket/Rates/Rates.html#RateSource Go

Links Customize Links Free HTML Windows Still today news special report

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Dates/Rates** - Options - Go

- Select -

Unit Information  
Vehicle Preferences

Unit # License Plate # Last 6 of VIN

Units Available

2000 Chevrolet Impala ICAR

Class to Charge for Get Rates

Rates

Daily		Weekly		Monthly		Hourly	Mileage	No
Rate	Mileage	Rate	Mileage	Rate	Mileage	Rate	Charge	Charge
15.99	150	59.99	750	179.99	1500	5.99	0.15	<input type="checkbox"/>

Coverages CDW,PAI,SLP

OK Cancel

Previous Next Complete

Res - 411781 Tkt - 234567 Ebk - 363221

Keycode=44 Local intranet

Bottom portion of Rates Panel

# Enterprise Rent-A-Car

3 Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss

Address: file:///Y:/APPS/Ecars\_20/Development%20%20Projects/HTML/Open%20Ticket/Rates/Rates.htm#RateSource Go

Links: Customize Links Filed HTML Windows STLtoday - news - special report

Reservation Contracts Callbacks

**DRIVERS**  
Driver summary 1  
Driver summary 2

**REFERRAL**  
Referral sum 1  
Referral sum 2

**DATES/RATES**  
Dates summary 1  
Dates summary 2

**BILL-TO**  
Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**  
Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**  
Notes summary 1  
Notes summary 2

**Dates/Rates** - Options - Go

Pickup Date: 10/04/2001 Time: 9:00 AM Return Date: 10/08/2001 Time: 3:00 PM

Start Charges if Different Change Return Information

Select Date For Charges To Start

2000 Chevrolet Impala ICAR

Unit Number Account Search

Date Time Cal Type Billing Cycle

Last 6 of VIN Units Available

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

Local intranet

Start Charges if Different pop-up box

# Enterprise Rent-A-Car

Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discard

Address: file:///Y:/APPS/Ecars\_20/Development%20%20Projects/HTML/Open%20Ticket/Rates/Rates.html#RateSource

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Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Dates/Rates**

Pickup Date: 10/04/2001 Time: 9:00 AM Return Date: 10/08/2001 Time: 3:00 PM

Start Charges if Different Change Return Information

10/04/2001 9:00 Change Return Information

Rate Source: Select Return Location  
Account Name: Group: Branch: Method: Location: OK Cancel

Unit Information  
Vehicle Preferences

Unit # License Plate # Last 6 of VIN Unit Available

2000 Chevrolet Impala ICAR

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

Local intranet

Change Return Information pop-up box

Microsoft Word 6.0 interface showing a document titled "Reservation Dates and Rates Spec - Microsoft Word". The document content is a form for "Rates/Dates" with sections for Driver's, Referral, Dates/Rates, Vehicle/Shop, and Notes. The "Rates/Dates" section includes a table of accounts with columns for Account Name, Account Number, Account Type, Opening CP/BR, Address, City, State, Zip, and Telephone. The table lists several accounts, including A/C Collector's, A/C Remodeling, Accell Lincoln, Advantage, African American, and Alcad. The document is displayed in a window with a menu bar (File, Edit, View, Insert, Format, Tools, Table, RequestPro, Window, Help) and a toolbar. The status bar at the bottom shows "Page 15", "Sec 2", "15:41", "At 1.2", "Ln 1", "Col 2", and various keyboard shortcuts.

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# Enterprise Rent-A-Car

Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discus

Address: file:///N:/APPS/Ecars\_20/Development%20%20Projects/HTML/Open%20Ticket/Rates/Rates.html#RateSource

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Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Dates/Rates** - Options -

Pickup: Return:

**Units Available**

Group: Branch:

Unit #: License Plate #: Last 6 of VIN: Search

Year	Make	Model	Series	Class	License	Location
1999	Mercury	Cougar	Series L	BCAR	W13-527	Saint Louis - Lindell branch
2000	Cadillac	Catera	Series N	CCAR	X13-539	Ladue
2000	Ford	Explorer	Series R	CCAR	X22-398	Ladue
2000	Chevrolet	Impala	Series P	DCAR	Y29-238	Brentwood Blvd.
2000	Chevrolet	Metro	Series B	DCAR	Y26-295	Brentwood Blvd.
2000	Ford	Escort	Series V	DCAR	Y22-398	Brentwood Blvd.

OK Cancel

2000 Chevrolet Impala / CAR

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

Done Local intranet

Units Available pop-up box

# Enterprise Rent-A-Car

Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss

Address: file:///Y:/APPS/Ecars\_20/Development%20%20Projects/HTML/Open%20Ticket/Rates/Rates.html#RateSource

Links: Customize Links Free Hotmail Windows GTI today - news - special report

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Dates/Rates** - Options - Go

- Select -

Unit Information  
Vehicle Preferences

**Rates Table**

Car Class	Daily		Weekly		Monthly		Hourly	Mileage
	Rate	Mileage	Rate	Mileage	Rate	Mileage	Rate	Charge
CCAR	9.99	250	29.99	500	99.99	2500	2.99	0.25
ECAR	15.99	250	34.99	500	109.99	2500	3.99	0.25
FCAR	20.99	250	39.99	500	209.99	2500	4.99	0.25
SCAR	25.99	250	44.99	500	249.99	2500	5.99	0.25
PCAR	30.99	250	49.99	500	309.99	2500	6.99	0.25
LCAR	35.99	250	54.99	500	409.99	2500	7.99	0.25

Cancel

OK Cancel

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

Keycode: 44 Local intranet

Get Rates display area



# Enterprise Rent-A-Car

Rates New - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss

Address file:///Y:/APPS/Ecars\_20/Development%20%20Projects/HTML/Open%20Ticket/Rates/Rates.html#RateSource

Links Customize Links Free Hotmail Windows STL today - news - special report

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Dates/Rates** - Options

Class to Charge for [ ] Get Rates

**Rates**

Daily		Weekly		Monthly		Hourly		No Charge	
Rate	Mileage	Rate	Mileage	Rate	Mileage	Rate	Mileage	Charge	No Charge
15.99	150	59.99	750	179.99	1500	5.99	0.15		

**Coverages** CDW,PAI,SLP

Item	Rate	Per	Start Date	Start Time	End Date	End Time
CDW	999.99	Monthly	12/22/2002	11:15 AM	12/24/2002	12:25 PM
PAI	999.99	Weekly	12/22/2002	11:15 AM	12/25/2002	8:45 PM
SLP	112.99	Weekly	12/22/2002	4:55 PM	12/25/2002	9:00 PM
-Select-						

OK Cancel

Previous Next Complete

Res - 411791 Tkt - 234567 Cbk - 363221

Local intranet

Expanded Coverages display area

## 3. Open Ticket Number

### 3.1 Behavior

This area shows the unique open ticket number that has been assigned to the newly created ticket. The ticket number is 6 alphanumeric characters long.

**Confidential**

©Enterprise Rent-A-Car,  
2000

14

---

# Enterprise Rent-A-Car

---

If another reservation or ticket is open, its reservation/ticket number will be displayed in this area as well. The user will have the ability to have up to 3 reservations/tickets open at a time. A hyperlink will be available on the reservation/ticket numbers of the reservations that are NOT currently being displayed. For the reservation/ticket that is currently displayed, the reservation/ticket number will not have a hyperlink available. This is to allow the user to navigate between the open reservations/ticket.

## 3.2 Validation

None identified at this time.

## 3.3 Business Exceptions

If the user tries to open a 4<sup>th</sup> reservation, the system will display a message stating, "A maximum of 3 reservations/tickets may be displayed".

## 3.4 System Exceptions

None identified at this time.

## 4. Pick Up Group and Branch Area

### 4.1 Behavior

This area will be defaulted to the terminal location group and branch. A group and branch are required and it will be displayed in the header information.

### 4.2 Validation

None, it will correspond to the PeopleSoft determined values.

### 4.3 Business Exceptions

None identified at this time.

### 4.4 System Exceptions

None identified at this time.

## 5. Pick Up Date Area

### 5.1 Behavior

This area will be an alphanumeric field. It will not be formatted for presentation purposes. The user may enter delineating characters, but these will be stripped out before writing to the database. There should be a calendar function available which would allow the user to select a date from a calendar icon, or similar feature, instead of entering a value. If the user selects a date from the calendar icons, it will be displayed in the date area formatted appropriately by the locale. (As determined for all locale specific formatting.) It should initially default to the current date.

### 5.2 Validation

It will be a valid month, day and year combination.

## 5.3 Business Exceptions

If the user enters or selects a Pick-up date which is prior to the current date, display a message "Pick-up date is prior to current date. Is this correct?"

If the user enters or selects a Pick-up date which is in the future, display a message "Pick-up date cannot be in the future."

A pick up date is required. If it is blanked out, not input or selected, display a message "Must specify a pick-up date".

## 5.4 System Exceptions

If not a valid month, day and year combination, the normal date in error message should be displayed.

## 6. Pick Up Time Area

### 6.1 Behavior

#### In locales where time is shown by AM PM designation:

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute and AM/PM designation, and a maximum of Hour Hour Minute Minute AM/PM designation. i.e. 945A, would designate 9:45 in the morning. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes **must** be two numeric values. The AM/PM designation of "A" or "P" must also be indicated. The user may enter delineating characters, but these will be removed before saving to the database.

#### In locales where time is shown by 24 hour designation:

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute, and a maximum of Hour Hour Minute Minute, i.e. 945 would designate 9:45 in the morning, 1425 would designate 2:25 in the afternoon. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes must be **two** numeric values. The user may enter delineating characters, but these will be removed before saving to the database.

It should initially default to the current time.

### 6.2 Validation

#### In locales where time is shown by AM PM designation:

Time increments can range from 1200A to 1159A and from 1200P until 1159P. If an entry is not within these two ranges display "Must specify a valid time".

#### In locales where time is shown by 24 hour designation:

Time increments can range from 0000 to 2400. If an entry is not within this range display "Must specify a valid time".

### 6.3 Business Exceptions

A pick-up time cannot be selected if there is not a pick-date selected. If this is attempted, display a message "Must specify a pick-up date".

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If the user enters or selects a Pick-up time which is prior to the current time, display a message "Pick-up time is prior to current time. Is this correct?"

A pick up time is required. If the default value is removed, display a message "Must specify a pick-up time".

It is possible to have a pick-up time in the future, but the pick-up date must be the same.

## 6.4 System Exceptions

None identified at this time.

## 7. Pick Up Time Drop Down

### 7.1 Behavior

This drop down icon will display the time in 15-minute increments. When selected, it should be positioned to the ¼ hour increment immediately preceding the current time and format according to the locale's format.

### 7.2 Validation

None identified at this time.

### 7.3 Business Exceptions

A pick-up time cannot be selected if there is not a pick-date selected. If this is attempted, display a message "Must specify a pick-up date".

A pick up time is required. If the default value is removed, display a message "Must specify a pick-up time".

If the user enters or selects a Pick-up time which is prior to the current time, display a message "Pick-up time is prior to current time. Is this correct?"

It is possible to have a pick-up time in the future, but the pick-up date must be the same.

### 7.4 System Exceptions

None identified at this time.

## 8. Start Charges if Different Button Function

### 8.1 Behavior

Selecting this function will present the user with a pop-up box showing date and time fields. Information entered in the pop-up box will be displayed under the Start Charges if Different button function.

### 8.2 Validation

See specific areas.

The ok feature will save date and time if valid.

The cancel feature will close the pop-up and not save entered information, if any.

### 8.3 Business Exceptions

See specific areas.

### 8.4 System Exceptions

None identified at this time.

## 9. Start Charges if Different Date Area

### 9.1 Behavior

This area will be an alphanumeric field. It will not be formatted for presentation purposes.

The user may enter delineating characters, but these will be stripped out before writing to the database. There should be a calendar function available which would allow the user to select a date from a calendar icon, or similar feature, instead of entering a value. If the user selects a date from the calendar icons, it will be displayed in the date area formatted appropriately by the locale. (As determined for all locale specific formatting.)

It should initially default a blank.

### 9.2 Validation

It will be a valid month, day and year combination.

### 9.3 Business Exceptions

The start charges if different date must be greater than or equal to the pick-up date, and less than or equal to the return date.

If the user enters or selects a start charges if different date which is prior to the Pick-up date, display a message "Start charges dates cannot be prior to pick-up date."

If the user enters or selects a start charges if different date which is after the return date, display a message "Start charges dates cannot be after return date."

### 9.4 System Exceptions

If not a valid month, day and year combination, the normal date in error message should be displayed.

## 10. Start Charges if Different Time Area

### 10.1 Behavior

#### **In locales where time is shown by AM PM designation:**

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute and AM/PM designation, and a maximum of Hour Hour Minute Minute AM/PM designation. i.e. 945A, would designate 9:45 in the morning. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes **must** be two numeric values. The AM/PM designation of "A" or "P" must also be indicated. The user may enter delineating characters, but these will be removed before saving to the database.

#### **In locales where time is shown by 24 hour designation:**

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute, and a maximum of Hour Hour Minute Minute, i.e. 945 would designate 9:45 in the morning, 1425 would designate 2:25 in the afternoon. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes must be **two** numeric values. The user may enter delineating characters, but these will be removed before saving to the database.

It should initially default to blank.

### 10.2 Validation

#### **In locales where time is shown by AM PM designation:**

Time increments can range from 1200A to 1159A and from 1200P until 1159P. If an entry is not within these two ranges display "Must specify a valid time".

#### **In locales where time is shown by 24 hour designation:**

Time increments can range from 0000 to 2400. If an entry is not within this range display "Must specify a valid time".

### 10.3 Business Exceptions

A start charges if different time cannot be selected if there is not a start charges if different date. If this is attempted, display a message "Must specify a start charges if different date".

The start charges if different time must be greater than or equal to the pick-up time, if the start charges if different date is equal the pick-up date.

The start charges if different time must be less than or equal to the return time, if the start charges if different date is equal the return date.

If the start charges if different date is equal to the pick-up date and the user enters or selects a start charges if different time which is prior to the Pick-up time, display a message "Start charges time cannot be prior to pick-up time"

If the start charges if different date is equal to the return date and the user enters or selects a start charges if different time which is after the return time, display a message "Start charges time cannot be after return time"

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## 10.4 System Exceptions

None identified at this time.

## 11. Start Charges if Different Time Drop Down

### 11.1 Behavior

This drop down icon will display the time in 15-minute increments. When selected, it should be positioned to the ¼ hour increment immediately preceding the current time and format according to the locale's format.

### 11.2 Validation

None identified at this time.

### 11.3 Business Exceptions

A start charges if different time cannot be selected if there is not a start charges if different date. If this is attempted, display a message "Must specify a start charges if different date".

The start charges if different time must be greater than or equal to the pick-up time, if the start charges if different date is equal the pick-up date.

The start charges if different time must be less than or equal to the return time, if the start charges if different date is equal the return date.

If the start charges if different date is equal to the pick-up date and the user enters or selects a start charges if different time which is prior to the Pick-up time, display a message "Start charges time cannot be prior to pick-up time"

If the start charges if different date is equal to the return date and the user enters or selects a start charges if different time which is after the return time, display a message "Start charges time cannot be after return time"

### 11.4 System Exceptions

None identified at this time.

## 12. Return Date Area

### 12.1 Behavior

This area will be an alphanumeric field. It will not be formatted for presentation purposes.

The user may enter delineating characters, but these will be stripped out before writing to the database. There should be a calendar function available which would allow the user to select a date from a calendar icon, or similar feature, instead of entering a value. If the

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user selects a date from the calendar icons, it will be displayed in the date area formatted appropriately by the locale. (As determined for all locale specific formatting.)  
It should default to a blank area.

## 12.2 Validation

It will be a valid month, day and year combination.

## 12.3 Business Exceptions

A return date is required.

If the user does not enter a date a message is displayed "Return date must be specified".

The return date cannot be before the pick-up date. If it is, display message "Return date must be equal to, or after Pick-up date".

## 12.4 System Exceptions

If not a valid month, day and year combination, the normal date in error message should be displayed

## 13. Return Time Area

### 13.1 Behavior

#### **In locales where time is shown by AM PM designation:**

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute and AM/PM designation, and a maximum of Hour Hour Minute Minute AM/PM designation. i.e. 945A, would designate 9:45 in the morning. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes **must** be two numeric values. The AM/PM designation of "A" or "P" must also be indicated. The user may enter delineating characters, but these will be removed before saving to the database.

#### **In locales where time is shown by 24 hour designation:**

This is an alphanumeric area. A valid entry to this area is a minimum of Hour Minute Minute, and a maximum of Hour Hour Minute Minute, i.e. 945 would designate 9:45 in the morning, 1425 would designate 2:25 in the afternoon. A leading zero may precede the hour, but is not required and will be removed before saving to the database. The minutes must be **two** numeric values. The user may enter delineating characters, but these will be removed before saving to the database.

This should default to a blank area.

### 13.2 Validation

#### **In locales where time is shown by AM PM designation:**

Time increments can range from 1200A to 1159A and from 1200P until 1159P. If an entry is not within these two ranges display "Must specify a valid time".

#### **In locales where time is shown by 24 hour designation:**

Time increments can range from 0000 to 2400. If an entry is not within this range display "Must specify a valid time".



## 13.3 Business Exceptions

A return time is required.

If the user does not enter a time a message is displayed "Return time must be specified".

A return time cannot be selected if there is not a return date entered or selected. If this is attempted, display a message "Must specify a return date".

If the return date is the same as the pickup date, then the return time must be later than the pickup time. If not, display a message "When pickup and return date are the same, return time must be later than pickup time".

## 13.4 System Exceptions

None identified at this time.

## 14. Return Time Drop Down

### 14.1 Behavior

This drop down icon will display the time in 15-minute increments. When selected, it should be positioned to the ¼ hour increment immediately preceding the current time and format according to the locale's format.

### 14.2 Validation

None identified at this time.

### 14.3 Business Exceptions

A return time is required.

If the user does not enter a time a message is displayed "Return time must be specified".

A return time cannot be selected if there is not a return date entered or selected. If this is attempted, display a message "Must specify a return date".

If the return date is the same as the pickup date, then the return time must be later than the pickup time. If not, display a message "When pickup and return date are the same, return time must be later than pickup time".

### 14.4 System Exceptions

None identified at this time.

## 15. Change Return Location Button Function

### 15.1 Behavior

Selecting this function will present the user with a pop-up box that will show the default group, branch (to the terminal's location) and return method drop down listings and a return location text area.

Only areas with changed information will be displayed under the Change Return Information button function. The terminal location default group and branch will NOT be displayed unless changes are made.

### 15.2 Validation

See specific areas.

There are not any required areas.

The ok feature will save selected or entered information.

The cancel feature will close the pop-up and not save entered information, if any.

### 15.3 Business Exceptions

See specific areas.

### 15.4 System Exceptions

None identified at this time.

## 16. Change Return Location Group

### 16.1 Behavior

This drop down listing will be limited to those groups that exist at any point in time. The selection of "All" is NOT included in the list. The users would also like to have the ability to type a character, alpha or numeric, into the criteria area and have the drop down list position to the character. (If the user enters an "H" the drop down list would position to the first string beginning with "H" in the list)

This should default to the terminal location group.

### 16.2 Validation

The items appearing in the list are static; the user cannot add items to the list dynamically.

### 16.3 Business Exceptions

None identified at this time.

### 16.4 System Exceptions

None identified at this time.

## 17. Change Return Location Branch

### 17.1 Behavior

This drop down listing will be limited to those branches that exist within the group at any point in time. The selection of "All" is NOT included in this selection list. The users would also like to have the ability to type a character, alpha or numeric, into the criteria area and have the drop down list position to the character. (If the user enters an "H" the drop down list would position to the first string beginning with

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“H” in the list)

Branch items appearing in the list will be limited to the Group item selected. Once the selected Group item has changed, the branch will be set to blanks. This will require the user to select a branch, at which time the display area will be refreshed, repopulated and repositioned. This will default to the terminal location branch.

## 17.2 Validation

The items appearing in the list are static; the user cannot add items to the list dynamically. This list will be limited to the branches associated with the group selected.

## 17.3 Business Exceptions

None identified at this time.

## 17.4 System Exceptions

None identified at this time.

## 18. Change Return Location Method

### 18.1 Behavior

This drop down listing will be limited to values associated with the return method, currently the valid values are: Branch, Drop and Ride Back in North America and Branch, Ride Back and Automatic Pickup (APU) in Europe.

### 18.2 Validation

The items appearing in the list are static; the user cannot add items to the list dynamically.

### 18.3 Business Exceptions

None identified at this time.

### 18.4 System Exceptions

None identified at this time.

## 19. Change Return Location Text Area

### 19.1 Behavior

This will be a free form text area.

### 19.2 Validation

None identified at this time.

### 19.3 Business Exceptions

None identified at this time.

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## 19.4 System Exceptions

None identified at this time.

## 20. Account Name Drop Down

### 20.1 Behavior

This area will be a drop down list of the Branch's short list, for North America. For everywhere else it will be the Group's Account list. If there are any of the following associated with the particular open ticket, they will appear at the top or beginning of the list in the following order.

- 1) Any Bill-To Accounts
- 2) Any Referral Accounts
- 3) Any Shop Accounts

The information displayed about an Account will be in the following order:

- 1) Account Name
- 2) Account Number
- 3) Rental Type
- 4) Owning Group/Branch
- 5) Address
- 6) City
- 7) State
- 8) Zip
- 9) Telephone

The Account Name in the display area will have a hyper-link which, when selected, will populate the Account Name, Account Number, Account Type and Rate Plan areas on the Dates and Rates panel.

### 20.2 Validation

None identified at this time.

### 20.3 Business Exceptions

If Account name or number is selected and the following account types are determined, then other areas will be defaulted to the values shown.

### 20.4 System Exceptions

None identified at this time.

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## 21. Account Number Area

### 21.1 Behavior

This area will allow entry of alphanumeric values. When there is a match, the system will populate the Account Name, Account Number, Account Type and Rate Plan areas on the Dates and Rates panel. The search will be executed as the user tabs off of the field.

### 21.2 Validation

None identified at this time.

### 21.3 Business Exceptions

If there is not an exact match, then display a message "Account number does not exist."

### 21.4 System Exceptions

None identified at this time.

## 22. Account Search Button

### 22.1 Behavior

Selecting this button will display the account search panel. See Referral Source Supplementary Specification for details.

### 22.2 Validation

None identified at this time.

### 22.3 Business Exceptions

None identified at this time.

### 22.4 System Exceptions

None identified at this time.

## 23. Rate Plan Drop Down

### 23.1 Behavior

This area will be populated when an Account Name or Account Number has been selected. If there are multiple plans associated with an Account, it will list all of the rate plans associated with that Account, and the user must choose one. When there are multiple rate plans, the value "select" will appear in area so the user knows that there are multiple rate plans and selection of a single one is required.

If there is only a single rate plan associated with and Account then the rate plan pop-up box will appear show all of the car classes and rates associated with that account.

### 23.2 Validation

None identified at this time.

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## 23.3 Business Exceptions

If no rate plans are associated with an Account then a message is displayed "No rates were found".

## 23.4 System Exceptions

None identified at this time.

## 24. Rental Type Drop Down

### 24.1 Behavior

This area will be a drop down list of Rental types.

#### Rental Type

Insurance  
Bodyshop  
Dealership  
Retail  
Corporate  
Other  
Employee  
Government  
Fleet  
Truck  
Rideshare  
Walk-in

### 24.2 Validation

Any value selected is valid.

### 24.3 Business Exceptions

None identified at this time.

### 24.4 System Exceptions

None identified at this time.

## 25. Billing Cycle Drop Down

### 25.1 Behavior

This area will initially default to the billing cycle associated with the Account and Rate Plan selected. It may be changed to another value.

Drop down domain values are Blank, 24 Hour and Calendar Day.

### 25.2 Validation

None identified at this time.

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## 25.3 Business Exceptions

See list in account name area for defaults, based on account.

## 25.4 System Exceptions

None identified at this time

## 26. Car Class to Charge for Drop Down

### 26.1 Behavior

This area will be a drop down list that also allows entry of alphanumeric values. The drop down list will be comprised of the most commonly used car classes. The entry of alphanumeric values will be edited against a larger more comprehensive car class list. If there is a successful vehicle/unit search, this will be populated with that particular vehicle's car class. It is possible to change this value.

Drop down list values

#### Class and Type

ECAR  
CCAR  
ICAR  
SCAR  
FCAR  
PCAR  
LCAR  
MVAR  
XFAR  
XPAR  
XXAR  
XVAR

### 26.2 Validation

None identified at this time.

### 26.3 Business Exceptions

If the values entered are not one of the ones listed below, a message is displayed "Must enter a valid car class".

Car Class Edit List of Values

#### Class and Type

MCAR  
MBAR  
MDAR

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MXAR  
MSAR  
MTAR  
MWAR  
MVAR  
MFAR  
MPAR  
ECAR  
EBAR  
EDAR  
EXAR  
ESAR  
ETAR  
EWAR  
EVAR  
EFAR  
EPAR  
CCAR  
CBAR  
CDAR  
CXAR  
CSAR  
CTAR  
CWAR  
CVAR  
CFAR  
CPAR  
ICAR  
IBAR  
IDAR  
IXAR  
ISAR  
ITAR  
IWAR  
IVAR  
IFAR  
IPAR  
SCAR  
SBAR  
SDAR  
SXAR  
SSAR  
STAR



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SWAR  
SVAR  
SFAR  
SPAR  
FCAR  
FBAR  
FDAR  
FXAR  
FSAR  
FTAR  
FWAR  
FVAR  
FFAR  
FPAR  
PCAR  
PBAR  
PDAR  
PXAR  
PSAR  
PTAR  
PWAR  
PVAR  
PFAR  
PPAR  
LCAR  
LBAR  
LDAR  
LXAR  
LSAR  
LTAR  
LWAR  
LVAR  
LFAR  
LPAR  
XCAR  
XBAR  
XDAR  
XXAR  
XSAR  
XTAR  
XWAR  
XVAR  
XFAR

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## XPAR

### 26.4 System Exceptions

None identified at this time.

## 27. Unit/Vehicle Input Search Area

### 27.1 Behavior

This will be an alphanumeric input area, consisting of 3 areas. The Unit Number, the License Number and the last 6 Digits of the Vehicle Identification Number, (VIN).

The Unit Number must be entered, with at least one of the other two. Using this information, the system will be able to determine the associated car class, for the rate source selected.

If there is only a single rate plan associated with the car class and rate source then the system will return rates for that particular unit/vehicle and the rates associated with all applicable coverages, PAI, CDW and SLP.

If there is more than one rate plan associated with the rate source, then the system will display all rate plans determined by the car class and allow the user to select a single rate plan. After a single rate plan is selected, then the system will return rates for that particular unit/vehicle and the rates associated with all applicable coverages, PAI, CDW and SLP.

At a minimum, we will need to return the associated Unit Number, Year, Make, Model and Car Class of the different vehicles. This information will need to be saved with the transaction also. It will also be displayed within the unit information box when retrieved. The search will initiate when the user tabs off of the last field.

### 27.2 Validation

None identified at this time.

### 27.3 Business Exceptions

If the unit/vehicle selected belong to a car class, which is not associated with a rate plan for the designated rate source, then a message is displayed "Rate plan does not contain selected car class".

If the user has not entered one of the required fields, display a message "Unit number and license plate number or last 6 of VIN required."

### 27.4 System Exceptions

None identified at this time.

At a minimum, we will need to return the associated Unit Number, Year, Make, Model and Car Class of the different vehicles. This information will need to be saved with the transaction also.

## 28. Units Available Search Button Function

### 28.1 Behavior

Selecting this button will display the Units available search pop-up panel.

The pop-up box will display:

Group and branch drop down boxes.

Unit number, License plate number and Last 6 of VIN input areas.

A search function which will execute the search

A display of the vehicles available table with columns:

Year, Make, Model, Series, Car Class, License Plate Number and Location.

The Group and Branch drop down boxes will default to the terminal location.

The Unit Number, License Plate Number and Last 6 of VIN, will default to blank. Any one, two or all three may be used to search the Vehicle Data base.

The vehicles available display will default display the available units at the terminal location default group and branch.

### 28.2 Validation

None identified at this time.

### 28.3 Business Exceptions

There must be at least one search criteria to execute a search, otherwise display a message "Must specify at least one search criteria".

### 28.4 System Exceptions

None identified at this time.

## 29. Get Rates Button

### 29.1 Behavior

Selection of this button will have the system execute a search for rate plans associated with the information entered.

### 29.2 Validation

None identified at this time.

### 29.3 Business Exceptions

At a minimum there must be an Account Name or an Account Number to search for rates. If the user selects this button without one of these a message is displayed "Must specify account name or number".

### 29.4 System Exceptions

None identified at this time.

## 30. Rate Plan – Pop-Up Display Area

### 30.1 Behavior

This is a pop-up window that will display the rates of a rate plan associated with an Account. Information displayed is:

Rate pop-up box columns and information:

- Car Class
- Daily – Rate and Mileage
- Weekly – Rate and Mileage
- Monthly – Rate and Mileage
- Hourly - Rate
- Mileage Charge

Car class will have a hyper-link which will allow the user to select the rate they want. This will then populate the rates display area on the Dates and Rates panel.

### 30.2 Validation

None identified at this time.

### 30.3 Business Exceptions

If an Account has more than one rate plan associated with it, then this information cannot be displayed until the Rate Plan area has a value.

If an Account has a single rate plan associated with it, then this information is displayed after the Account Name is selected or an Account Number is entered.

If an Account has a single rate plan and there is a value in the Car Class area, and that car class is in the rate plan, then the rates display area of the Dates and Rates panel is populated with the appropriate information and the rate plan pop-up window is NOT displayed.

If an Account has multiple rate plans and there is a value in the Car Class area, and there is not a value in Rate Plan area, a message should display “Must specify a rate plan”.

If an Account has a multiple rate plans, and there is a value in the Rate Plan area and there is a value in the Car Class area, and that car class is in the rate plan, then the rates display area of the Dates and Rates panel is populated with the appropriate information and the rate plan pop-up window is NOT displayed.

If an Account has a single rate plans, and there is a value in the Car Class area, but that car class is not in the rate plan, then a message is displayed, “Rate plan does not contain selected car class”.

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If an Account has a multiple rate plans, and there is a value in the Rate Plan area and there is a value in the Car Class area, but that car class is not in the rate plan, then a message is displayed "No rates found for car class selected".

## 30.4 System Exceptions

None identified at this time

## 31. Rate Plan – Display Area

### 31.1 Behavior

This is a display area that will be populated with the rates associated with a particular car class of a rate plan associated with an Account.

Information displayed is:

- Car Class
- Daily Rate
- Daily Mileage
- Weekly Rate
- Weekly Mileage
- Monthly Rate
- Monthly Mileage
- Hourly Rate
- Mileage Charge
- No Charge Check Box

All of the information presented, except Car Class, has the ability to be edited or changed.

There is an interaction between the Mileage Charge and the No Charge Check Box. If the No Charge Check Box is selected, then the Mileage Charge is set to zero and the area disabled. Unselecting the No Charge Check Box will enable the Mile Charge area for entering values.

### 31.2 Validation

None identified at this time.

### 31.3 Business Exceptions

Negative values may not be entered. If attempted, display message "Must specify positive amount".

### 31.4 System Exceptions

None identified at this time

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## 32. Coverages Area

### 32.1 Behavior

This will be a collapsible/expandable area to display the different coverages. There will be some sort of button functionality which will allow this area to be expanded or collapsed. In either state the selected coverages will be listed to the side of the button function. Values within area may be changed or edited.

Each area will have a drop-down box to be able to select additional items.

It is anticipated that the information to be displayed for each instance of the coverage is:

- Description
- Rate
- Rate Frequency
- Start Date
- Start Time
- End Date
- End Time

All of this information will come from what is maintained in the Perot systems.

### 32.2 Validation

None identified at this time.

### 32.3 Business Exceptions

Negative values may not be entered in the rate area. If attempted, display message "Must specify positive amount".

Dates may be changed, but cannot be beyond the Pick-up and/or Return date range. If this is attempted, display appropriate message, either "Start date cannot be before pick-up date" or "End date cannot be after return date".

Similarly, Times may be changed, but cannot be beyond the Pick-up and/or Return time range. If this is attempted, display appropriate message, either "Start time cannot be before pick-up time" or "End time cannot be after return time".

### 32.4 System Exceptions

None identified at this time.

## 33. Coverages - CDW Area

### 33.1 Behavior

This area will initially default to the amount of Collision Damage Waiver associated with the Car Class and Rate Plan for the particular Account. This area may be changed or edited.

Each area will have a drop-down box to be able to select additional items.

### 33.2 Validation

None identified at this time.

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## 33.3 Business Exceptions

Negative values may not be entered in the rate area. If attempted, display message "Must specify positive amount".

Dates may be changed, but cannot be beyond the Pick-up and/or Return date range. If this is attempted, display appropriate message, either "Start date cannot be before pick-up date" or "End date cannot be after return date".

Similarly, Times may be changed, but cannot be beyond the Pick-up and/or Return time range. If this is attempted, display appropriate message, either "Start time cannot be before pick-up time" or "End time cannot be after return time".

## 33.4 System Exceptions

None identified at this time

## 34. Coverages - PAI Area

### 34.1 Behavior

This area will initially default to the amount of Personal Accident Insurance associated with the Car Class and Rate Plan for the particular Account. This area may be changed or edited. Each area will have a drop-down box to be able to select additional items.

### 34.2 Validation

None identified at this time.

### 34.3 Business Exceptions

Negative values may not be entered in the rate area. If attempted, display message "Must specify positive amount".

Dates may be changed, but cannot be beyond the Pick-up and/or Return date range. If this is attempted, display appropriate message, either "Start date cannot be before pick-up date" or "End date cannot be after return date".

Similarly, Times may be changed, but cannot be beyond the Pick-up and/or Return time range. If this is attempted, display appropriate message, either "Start time cannot be before pick-up time" or "End time cannot be after return time".

### 34.4 System Exceptions

None identified at this time

## 35. Coverages - SLP Area

### 35.1 Behavior

This area will initially default to the amount of Supplemental Liability Protection associated with the Car Class and Rate Plan for the particular Account. This area may be changed or edited. Each area will have a drop-down box to be able to select additional items.

### 35.2 Validation

None identified at this time.

## 35.3 Business Exceptions

Negative values may not be entered in the rate area. If attempted, display message "Must specify positive amount".

Dates may be changed, but cannot be beyond the Pick-up and/or Return date range. If this is attempted, display appropriate message, either "Start date cannot be before pick-up date" or "End date cannot be after return date".

Similarly, Times may be changed, but cannot be beyond the Pick-up and/or Return time range. If this is attempted, display appropriate message, either "Start time cannot be before pick-up time" or "End time cannot be after return time".

## 35.4 System Exceptions

None identified at this time.

## 36. Cancel Function Button

### 36.1 Behavior

The Cancel image/button will take the user to the last panel accessed.

### 36.2 Validation

None identified at this time.

### 36.3 Business Exceptions

None identified at this time.

### 36.4 System Exceptions

None identified at this time.

## General Requirements

### 37. Error Message - Session Already Exists for this Browser Instance

This captures the Error Message generated when the user attempts to open a new session on the terminal without opening a new instance of the IE browser.

#### 37.1 Behavior

When the user attempts to open a new session on the same terminal without opening a new instance of the browser, display the following error message:

"There is a session already open for this browser on this terminal.  
Please use that session or open a new browser."

For Informational purposes: This situation can occur when the user attempts to open the active session by selecting the window titled "About" and uses the "back" button to navigate to the previous page.



## 38. Security

The user must have the appropriate security level to access these screens. The user is allowed to view or print anything. It is when they attempt to edit a reservation that their security restrictions will be enforced.

**Version 2.7**

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<b>Screen Action Specification</b>	<b>Date: 12/20/2001</b>
<b>Vehicle / Shop</b>	

## Revision History

Date	Version	Description	Author
08/03/2001	1.0	Created document	Chris Carr
08/07/2001	1.1	Updated document with revised screen shots and verbiage	Chris Carr
08/10/2001	1.2	Updated document to reflect Use Case changes	Chris Carr
08/13/2001	1.3	Clarification of Contact Last Name and/or Contact First Name. Added info relating to System generated Notes.	Chris Carr
08/14/2001	1.4	Added info for European Branch Short list	Chris Carr
08/16/2001	1.5	<ul style="list-style-type: none"> <li>Changed text in 4.5.1 to "... Account's phone number."</li> <li>Changed text in 4.5.2 to "Entered data should be 10 digits for US to include area code or appropriate format for other countries."</li> <li>Phone number is pre-populated with value from selected Account.</li> <li>Changing Account name will update the Account number and vice versa.</li> <li>When "Theft" is selected, Theft Waiver Days (3.14) is no longer a required field.</li> <li>If a value other than (Blank) is selected for Theft Waiver Days (3.14), the Date of Loss (3.12) field is then required.</li> </ul>	Chris Carr
08/20/2001	1.6	Renamed document to Vehicle/Shop.	Chris Carr
08/24/2001	1.7	Added Country code to Not on File.	Chris Carr
08/30/2001	1.8	<ul style="list-style-type: none"> <li>Added screen shots for the United Kingdom, Ireland and Germany versions.</li> <li>Added screen shot for Germany's Schwakeliste.</li> <li>Made changes to the order of text descriptions of the fields to reflect the new order presented in the screen shots of the Vehicle/Shop screen.</li> <li>License Plate Number will no longer be displayed for North America.</li> <li>License Plate Number will be displayed as Registration Number for all of the European countries.</li> <li>Removed the requirement of Date of Loss if a Theft Waiver Days value is selected.</li> </ul>	Chris Carr

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		<ul style="list-style-type: none"> <li>Removed the "and/or" requirement for Contact Last Name and Contact First Name. Only the Last Name is now required.</li> <li>Added a new section for the text description of the Schwakeliste fields.</li> </ul>	
09/04/2001	1.9	<ul style="list-style-type: none"> <li>Year will not be displayed for Ireland.</li> <li>Schwakeliste pop-up is no longer required.</li> <li>System note needs to be generated for registration number and class.</li> </ul>	Chris Carr
09/06/2001	2.0	Put in changes for Class now being a drop down selection field.	Chris Carr
09/06/2001	2.1	Updated with changes from Reservation	James Atteberry
09/12/2001	2.2	Updated with new screen shots containing new navigation areas.	Chris Carr
09/21/2001	2.3	<ul style="list-style-type: none"> <li>Expanded sys-gen note for Vehicle Year/Make/Model changed to 3 separate notes.</li> <li>Reinstated the "and/or" requirement for Contact Last Name and First Name.</li> </ul>	Chris Carr
10/12/2001	2.4	Updated with new screen shots.	Chris Carr
10/23/2001	2.5	<ul style="list-style-type: none"> <li>Updated with new screen shots and verbiage that reflect the change of the "Add Contact" button to now say "New Contact".</li> <li>Changed system notes for "Not on File" to reflect what was developed.</li> </ul>	Chris Carr
10/30/2001	2.6	Added verbiage stating that blanking out the Account name/number will then cause the Account number/name and Contact to also be blanked out.	Chris Carr
11/13/2001	2.7	<ul style="list-style-type: none"> <li>Changed theft waiver days from "One Day", "Two Days", "Three Days" to "1 Day", "2 Days" and "3 Days".</li> <li>Added system generated notes for Other Make and Other Model.</li> </ul>	Chris Carr

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## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Vehicle / Shop screen.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Screen Prints

**Vehicle / Shop - Microsoft Internet Explorer provided by Enterprise Rent-a-Car**

File Edit View Favorites Tools Help

Address Y:\APPS\Ecars\_20\Development\Projects\HTML\Open Ticket\Shop\RentersVehicle&Shop.html

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Renter's Vehicle** Options Go

**Vehicle**

Year  
Make Other Make  
Model Other Model  
Color Other Color

**Loss Information**

Is Car Drivable? Type of Loss  
Total Loss? Date of Loss  
Theft Waiver Days  
Vehicle Notes

**Shop**

Shop  
Account Name Account Number Account Search Not on File  
Contact Name Phone Number New Contact

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

Done Local intranet

Figure 1 – Vehicle / Shop (North America)

Rental Redesign	Version: 2.7
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Vehicle / Shop	

Vehicle / Shop - Ireland and United Kingdom - Microsoft Internet Explorer provided by Enterprise Rent-A-Car

File Edit View Favorites Tools Help

Address Y:\APPS\Ecars\_20\Development Projects\HTML\Open Ticket\Shop\Vehicle&Shop-IrelandUK.html

Reservation Contracts Callbacks

**DRIVERS**  
Driver summary 1  
Driver summary 2  
**REFERRAL**  
Referral sum 1  
Referral sum 2  
**DATES/RATES**  
Dates summary 1  
Dates summary 2  
**BILL-TO**  
Bill-To summary 1  
Bill-To summary 2  
**VEHICLE/SHOP**  
Vehicle/Shop 1  
Vehicle/Shop 2  
**NOTES**  
Notes summary 1  
Notes summary 2

**Renter's Vehicle**

Vehicle  
Registration Number

Make

Model

Color

Other Make

Other Model

Other Color

**Loss Information**  
Is Car Drivable?   
Total Loss?   
Type of Loss   
Date of Loss

Vehicle Notes

**Shop**  
Shop  
Account Name   
Contact Name   
Account Number   
Phone Number

Figure 2 – Vehicle / Shop (Ireland & United Kingdom)



Rental Redesign	Version: 2.7
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Vehicle / Shop - Germany - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Address Y:\APPS\Ecars\_20\Development Projects\HTML\Open Ticket\Shop\Vehicle&Shop-Germany.html

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Renter's Vehicle** - Options - Go X

Vehicle

Registration Number

Year Class

Make Other Make

Model Other Model

Color Other Color

**Loss Information**

Is Car Drivable? Type of Loss

Total Loss? Date of Loss

Vehicle Notes

**Shop**

Shop

Account Name Account Number

Contact Name Phone Number

Account Search Not on File

New Contact

Previous Next Complete

Res - 411781 Tkt - 234567 Cbk - 363221

Done Local intranet

Figure 3 – Vehicle / Shop (Germany)

Rental Redesign	Version: 2.7
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Vehicle / Shop	

Vehicle / Shop - Germany - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Address: Y:\APPS\Ecars\_20\Development Projects\HTML\Open Ticket\Shop\Vehicle&Shop-Germany.html

Reservation Contracts Callbacks

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Renter's Vehicle**

Vehicle  
Registration Number  
Year  
Make  
Model  
Color

**Shop**

Shop  
Account Name  
Contact Name

**Not on File**

Name\*  
Address\*  
Zip\*  
City\*  
Phone Number\*  
Contact Last Name  
Contact First Name

Country\*  
State\*

pe  
Loss  
ate of Loss

Not on File

OK Cancel Complete

Previous Next

Res - 411781 Tkt - 234567 Cbk - 363221

keycode=18 Local intranet

Figure 4 – Add Account Not on File

Rental Redesign	Version: 2.7
Screen Action Specification	Date: 12/20/2001
Vehicle / Shop	

Vehicle / Shop - Germany - Microsoft Internet Explorer provided by Enterprise Rent-a-Car

File Edit View Favorites Tools Help

Address: Y:\APPS\Ecars\_20\Development Projects\HTML\Open Ticket\Shop\Vehicle&Shop-Germany.html

Reservation: 0 Contracts: 1 Callbacks: 0

**DRIVERS**

Driver summary 1  
Driver summary 2

**REFERRAL**

Referral sum 1  
Referral sum 2

**DATES/RATES**

Dates summary 1  
Dates summary 2

**BILL-TO**

Bill-To summary 1  
Bill-To summary 2

**VEHICLE/SHOP**

Vehicle/Shop 1  
Vehicle/Shop 2

**NOTES**

Notes summary 1  
Notes summary 2

**Renter's Vehicle**

Vehicle

Registration Number

Year

Class

Make

Other Make

Model

Other Model

Color

Loss Information

Is Car Drivable?

Type of Loss

Total Loss?

Date of Loss

**New Contact**

Last Name:

First Name:

Account Name

Contact Name

OK Cancel

New Contact

Not on File

Previous Next Complete

Res - 411761 Tkt - 234567 Cbk - 363221

keycode=9 Local intranet

Figure 5 – New Contact

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### 3. Vehicle / Shop (Figure 1, Figure 2, Figure 3)

#### 3.1 Registration Number (Vehicle area of Renter's Vehicle sub-screen)

##### 3.1.1 Behavior

This is a text field in which the user may enter a Registration Number. This field only appears on the European versions (Figure 2, Figure 3) of the application and is hidden on the North American version (Figure 1).

##### 3.1.2 Validation

No validation is necessary.

##### 3.1.3 Business Exceptions

None have been identified at this time.

##### 3.1.4 System Exceptions

None have been identified at this time.

#### 3.2 Year (Vehicle area of Renter's Vehicle sub-screen)

##### 3.2.1 Behavior

This is a drop-down field containing the Years available for searching. This field is hidden on the Ireland and United Kingdom version (Figure 2) of the application and is visible on the North American and German versions (Figure 1, Figure 3).

##### 3.2.2 Validation

No validation is necessary.

##### 3.2.3 Business Exceptions

None have been identified at this time.

##### 3.2.4 System Exceptions

None have been identified at this time.

#### 3.3 Class (Vehicle area of Renter's Vehicle sub-screen)

##### 3.3.1 Behavior

This is a drop-down field containing a list of numbers from 1 to 10 for the User to select as the Class. This field only appears on the German version (Figure 3) of the application and is hidden on the North American and the Ireland and United Kingdom versions (Figure 1, Figure 2).

##### 3.3.2 Validation

No validation is necessary.

##### 3.3.3 Business Exceptions

None have been identified at this time.

##### 3.3.4 System Exceptions

None have been identified at this time.

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### **3.4 Make (Vehicle area of Renter's Vehicle sub-screen)**

#### **3.4.1 Behavior**

This is a drop-down field containing a list of makes available for the Year (3.2) selected. If a Make different from "Other Make" is selected from the list, the Other Make (3.5) field should be cleared out. This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.4.2 Validation**

No validation is necessary.

#### **3.4.3 Business Exceptions**

None have been identified at this time.

#### **3.4.4 System Exceptions**

None have been identified at this time.

### **3.5 Other Make (Vehicle area of Renter's Vehicle sub-screen)**

#### **3.5.1 Behavior**

This is a text field in which the user may enter a Make that was not available in the drop-down. If a value is entered, the Make (3.4) drop-down field should be cleared out if it has a value different from "Other Make". This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.5.2 Validation**

No validation is necessary.

#### **3.5.3 Business Exceptions**

None have been identified at this time.

#### **3.5.4 System Exceptions**

None have been identified at this time.

### **3.6 Model (Vehicle area of Renter's Vehicle sub-screen)**

#### **3.6.1 Behavior**

This is a drop-down field containing a list of models available for the Make (3.4) selected. If a Model different from "Other Model" is selected from the list, the Other Model (3.7) field should be cleared out. This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.6.2 Validation**

No validation is necessary.

#### **3.6.3 Business Exceptions**

None have been identified at this time.

#### **3.6.4 System Exceptions**

None have been identified at this time.

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### **3.7 Other Model (Vehicle area of Renter's Vehicle sub-screen)**

#### **3.7.1 Behavior**

This is a text field in which the user may enter a Model that was not available in the drop-down. If a value is entered, the Model (3.6) drop-down field should be cleared out if it has a value different from "Other Model". This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.7.2 Validation**

No validation is necessary.

#### **3.7.3 Business Exceptions**

None have been identified at this time.

#### **3.7.4 System Exceptions**

None have been identified at this time.

### **3.8 Color (Vehicle area of Renter's Vehicle sub-screen)**

#### **3.8.1 Behavior**

This is a drop-down field containing a list of available colors. If a Color different from "Other Color" is selected from the list, the Other Color (3.9) field should be cleared out. This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.8.2 Validation**

No validation is necessary.

#### **3.8.3 Business Exceptions**

None have been identified at this time.

#### **3.8.4 System Exceptions**

None have been identified at this time.

### **3.9 Other Color (Vehicle area of Renter's Vehicle sub-screen)**

#### **3.9.1 Behavior**

This is a text field in which the user may enter a Color that was not available in the drop-down. If a value is entered, the Color (3.8) drop-down field should be cleared out if it has a value different from "Other Color". This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.9.2 Validation**

No validation is necessary.

#### **3.9.3 Business Exceptions**

None have been identified at this time.

#### **3.9.4 System Exceptions**

None have been identified at this time.

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### **3.10 Is Car Drivable? (Loss Information area of Renter's Vehicle sub-screen)**

#### **3.10.1 Behavior**

This is a drop down field containing the following domain values:

- (Blank) - Default
- Yes
- No

This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.10.2 Validation**

No validation is necessary.

#### **3.10.3 Business Exceptions**

None have been identified at this time.

#### **3.10.4 System Exceptions**

None have been identified at this time.

### **3.11 Type of Loss? (Loss Information area of Renter's Vehicle sub-screen)**

#### **3.11.1 Behavior**

This is a drop down field containing the following domain values:

- (Blank) - Default
- Damage
- Theft

This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.11.2 Validation**

No validation is necessary.

#### **3.11.3 Business Exceptions**

None have been identified at this time.

#### **3.11.4 System Exceptions**

None have been identified at this time.

### **3.12 Total Loss? (Loss Information area of Renter's Vehicle sub-screen)**

#### **3.12.1 Behavior**

This is a drop down field containing the following domain values:

- (Blank) - Default
- Yes
- No

This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.12.2 Validation**

No validation is necessary.

#### **3.12.3 Business Exceptions**

None have been identified at this time.

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#### 3.12.4 System Exceptions

None have been identified at this time.

### 3.13 Date of Loss (Loss Information area of Renter's Vehicle sub-screen)

#### 3.13.1 Behavior

This is a text field in which the user may enter a date value. This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### 3.13.2 Validation

Entered data should be in a MM/DD/YYYY format.

#### 3.13.3 Business Exceptions

None have been identified at this time.

#### 3.13.4 System Exceptions

None have been identified at this time.

### 3.14 Calendar button (Loss Information area of Renter's Vehicle sub-screen)

#### 3.14.1 Behavior

This will bring up a calendar pop-up window allowing the user to select a specific date. The selected date will fill the Date of Loss (3.13) field. This button appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### 3.14.2 Validation

No validation is necessary.

#### 3.14.3 Business Exceptions

None have been identified at this time.

#### 3.14.4 System Exceptions

None have been identified at this time.

### 3.15 Theft Waiver Days (Loss Information area of Renter's Vehicle sub-screen)

#### 3.15.1 Behavior

This is a drop down field containing the following domain values:

- (Blank) - Default
- 1 Day
- 2 Days
- 3 Days

This field only appears on the North American version (Figure 1) of the application and is hidden on the European versions (Figure 2, Figure 3).

#### 3.15.2 Validation

No validation is necessary.

#### 3.15.3 Business Exceptions

None have been identified at this time.



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#### 3.15.4 *System Exceptions*

None have been identified at this time.

### 3.16 **Vehicle Notes (Renter's Vehicle sub-screen)**

#### 3.16.1 *Behavior*

This is a free form text field in which the user may enter data. The information entered here is only visible from this screen. This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### 3.16.2 *Validation*

No validation is necessary.

#### 3.16.3 *Business Exceptions*

None have been identified at this time.

#### 3.16.4 *System Exceptions*

None have been identified at this time.

### 3.17 **Account Name (Shop sub-screen)**

#### 3.17.1 *Behavior*

This field's value is entered when:

- User enters the Account name.
- User clicks the "down arrow" button (3.18) to the immediate right and selects an Account from the Branch Short list.
- User enters a valid number in the Account Number (3.19) field. That number's Account name value will then populate this field.
- User clicks the "Search" button (3.20) and selects an Account from the Account Information list.
- User clicks the "Not on File" button (3.21) and enters the appropriate new Account information.

If an Account name is entered, the Account Number (3.19), Contact Name (3.22) and Phone Number (3.25) fields will then be populated. If the Account name is blanked out and the user tabs off or leaves the field, Account Number (3.19) and Contact (3.22) will also be blanked out. This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### 3.17.2 *Validation*

No validation is necessary.

#### 3.17.3 *Business Exceptions*

None have been identified at this time.

#### 3.17.4 *System Exceptions*

None have been identified at this time.

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### **3.18 Down arrow button (Shop sub-screen)**

#### **3.18.1 Behavior**

This will bring up the Branch Short list allowing the user to select a specific Account. If in Europe, the European Branch Short list will be brought up. If an Account is selected, the Account Name (3.17), Account Number (3.19), Contact Name (3.22) and Phone Number (3.25) fields will then be populated. This button appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.18.2 Validation**

No validation is necessary.

#### **3.18.3 Business Exceptions**

None have been identified at this time.

#### **3.18.4 System Exceptions**

None have been identified at this time.

### **3.19 Account Number (Shop sub-screen)**

#### **3.19.1 Behavior**

This field's value is entered when:

- User enters a valid name in the Account Name (3.17) field. That name's Account number value will then populate this field.
- User clicks the "down arrow" button (3.18) to the immediate left and selects an Account from the Branch Short list.
- User enters the Account number.
- User clicks the "Search" button (3.20) and selects an Account from the Account Information list.
- User clicks the "Not on File" button (3.21) and enters the appropriate new Account information.

If an Account number is entered, the Account Name (3.17), Contact Name (3.22) and Phone Number (3.25) fields will then be populated. If the Account number is blanked out and the user tabs off or leaves the field, Account Name (3.17) and Contact (3.22) will also be blanked out. This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### **3.19.2 Validation**

No validation is necessary.

#### **3.19.3 Business Exceptions**

None have been identified at this time.

#### **3.19.4 System Exceptions**

None have been identified at this time.

### **3.20 Search button (Shop sub-screen)**

#### **3.20.1 Behavior**

This will bring up the Account Search screen allowing the user to search for and then select a specific Account. If an Account is selected, the Account Name (3.17), Account

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Number (3.19), Contact Name (3.22) and Phone Number (3.25) fields will then be populated. This button appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### 3.20.2 Validation

No validation is necessary.

#### 3.20.3 Business Exceptions

None have been identified at this time.

#### 3.20.4 System Exceptions

None have been identified at this time.

### 3.21 Not on File button (Shop sub-screen)

#### 3.21.1 Behavior

This will bring up the Add Account Not on File screen (Figure 4) allowing the user to enter information for a new Account. After all the necessary fields on that screen are entered, the Account Name (3.17), Account Number (3.19), Contact Name (3.22) and Phone Number (3.25) fields will then be populated with that screen's entered information. This button appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### 3.21.2 Validation

No validation is necessary.

#### 3.21.3 Business Exceptions

None have been identified at this time.

#### 3.21.4 System Exceptions

None have been identified at this time.

### 3.22 Contact Name (Shop sub-screen)

#### 3.22.1 Behavior

This field's value is entered when:

- User enters a valid name in the Account Name (3.17) field. That name's Contact name value will then populate this field.
- User clicks the "down arrow" button (3.18) to the immediate right of Account Name (3.17) and selects an Account from the Branch Short list. That Account's Contact name value will then populate this field's value.
- User enters a valid number in the Account Number (3.19) field. That number's Contact name value will then populate this field.
- User clicks the "Search" button (3.20) and selects an Account from the Account Information list. That Account's Contact name value will then populate this field's value.
- User clicks the "Not on File" button (3.21) and enters the appropriate new Contact information after the new Account information. After all the necessary fields on

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that screen are entered, that screen's entered information for Contact name will then populate this field's value.

- User enters the Contact name.
- User clicks the "down arrow" button (3.23) to the immediate right and selects a Contact from the Contact list.
- User clicks the "Add New" button (3.24) and enters the appropriate new Contact information.

This field appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### 3.22.2 *Validation*

No validation is necessary.

#### 3.22.3 *Business Exceptions*

None have been identified at this time.

#### 3.22.4 *System Exceptions*

None have been identified at this time.

### 3.23 **Down arrow button (Shop sub-screen)**

#### 3.23.1 *Behavior*

This will bring up the Contact list allowing the user to select a specific Contact. If a Contact is selected, the Contact Name (3.22) field will then be populated. This button appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### 3.23.2 *Validation*

No validation is necessary.

#### 3.23.3 *Business Exceptions*

None have been identified at this time.

#### 3.23.4 *System Exceptions*

None have been identified at this time.

### 3.24 **New Contact button (Shop sub-screen)**

#### 3.24.1 *Behavior*

This will bring up the New Contact screen (Figure 5) allowing the user to enter information for a new Contact.

After the necessary field(s) on that screen is/are entered, the Contact Name (3.22) field will then be populated with that screen's entered information. This button appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### 3.24.2 *Validation*

No validation is necessary.

#### 3.24.3 *Business Exceptions*

None have been identified at this time.

#### 3.24.4 *System Exceptions*

None have been identified at this time.

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### 3.25 Phone Number (Shop sub-screen)

#### 3.25.1 Behavior

This field's value is entered when:

- User enters a valid name in the Account Name (3.17) field. That name's Phone number value will then populate this field.
- User clicks the "down arrow" button (3.18) to the immediate right of Account Name (3.17) and selects an Account from the Branch Short list. That Account's Phone number value will then populate this field's value.
- User enters a valid number in the Account Number (3.19) field. That number's Phone number value will then populate this field.
- User clicks the "Search" button (3.20) and selects an Account from the Account Information list. That Account's Phone number value will then populate this field's value.
- User clicks the "Not on File" button (3.21) and enters the appropriate new Account information. That Account's Phone number value will then populate this field's value.
- User enters the Phone number.

This button appears on all versions (Figure 1, Figure 2, Figure 3) of the application.

#### 3.25.2 Validation

No validation is necessary.

#### 3.25.3 Business Exceptions

None have been identified at this time.

#### 3.25.4 System Exceptions

None have been identified at this time.

### 3.26 Button Line Area

#### 3.26.1 Behavior

The Previous button will take the user to the Bill-to screen within the same transaction.

The Next button will take the user to the Notes screen within the same transaction.

The Complete button will initiate a save of the transaction. All validations will be performed, returning any errors to the user. If there are no errors, the transaction is saved, and the user is returned to the Open Ticket home page.

## 4. Not on File (Figure 4)

### 4.1 Name

#### 4.1.1 Behavior

This is a text field in which the user may enter an Account name.

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#### 4.1.2 Validation

No validation is necessary.

#### 4.1.3 Business Exceptions

None have been identified at this time.

#### 4.1.4 System Exceptions

None have been identified at this time.

### 4.2 Address

#### 4.2.1 Behavior

This is a free form text field in which the user may enter an Account's address.

#### 4.2.2 Validation

No validation is necessary.

#### 4.2.3 Business Exceptions

None have been identified at this time.

#### 4.2.4 System Exceptions

None have been identified at this time.

### 4.3 Zip

#### 4.3.1 Behavior

This is a text field in which the user may enter an Account's zip code.

#### 4.3.2 Validation

No validation is necessary.

#### 4.3.3 Business Exceptions

None have been identified at this time.

#### 4.3.4 System Exceptions

None have been identified at this time.

### 4.4 Geographic Framework button (lightening bolt graphic)

#### 4.4.1 Behavior

This will fill in the City (4.6) and State (4.7) fields if there is only 1 city for the zip code. If more than 1 city is in the entered zip code, the Multiple Cities Found page will be brought up, allowing the user to select a city. The City (4.6) and State (4.7) fields will then be filled with the user's selection.

#### 4.4.2 Validation

No validation is necessary.

#### 4.4.3 Business Exceptions

None have been identified at this time.

#### 4.4.4 System Exceptions

None have been identified at this time.

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#### **4.5 Country**

##### **4.5.1 Behavior**

This is a drop down field containing the list of countries.

##### **4.5.2 Validation**

No validation is necessary.

##### **4.5.3 Business Exceptions**

None have been identified at this time.

##### **4.5.4 System Exceptions**

None have been identified at this time.

#### **4.6 City**

##### **4.6.1 Behavior**

This is a text field in which the user may enter an Account's city. This field may also be filled by actions performed by the Geographic Framework button (4.4).

##### **4.6.2 Validation**

No validation is necessary.

##### **4.6.3 Business Exceptions**

None have been identified at this time.

##### **4.6.4 System Exceptions**

None have been identified at this time.

#### **4.7 State**

##### **4.7.1 Behavior**

This is a drop down field containing the list of states. This field may also be filled by actions performed by the Geographic Framework button (4.4).

##### **4.7.2 Validation**

No validation is necessary.

##### **4.7.3 Business Exceptions**

None have been identified at this time.

##### **4.7.4 System Exceptions**

None have been identified at this time.

#### **4.8 Phone**

##### **4.8.1 Behavior**

This is a text field in which the user may enter an Account's phone number.

##### **4.8.2 Validation**

Entered data should be 10 digits for the US to include area code or the appropriate format for other countries.

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#### 4.8.3 *Business Exceptions*

None have been identified at this time.

#### 4.8.4 *System Exceptions*

None have been identified at this time.

### 4.9 **Contact Last Name**

#### 4.9.1 *Behavior*

This is a text field in which the user may enter a Contact's last name for the new Account.

#### 4.9.2 *Validation*

No validation is necessary.

#### 4.9.3 *Business Exceptions*

None have been identified at this time.

#### 4.9.4 *System Exceptions*

None have been identified at this time.

### 4.10 **Contact First Name**

#### 4.10.1 *Behavior*

This is a text field in which the user may enter a Contact's first name for the new Account.

#### 4.10.2 *Validation*

No validation is necessary.

#### 4.10.3 *Business Exceptions*

None have been identified at this time.

#### 4.10.4 *System Exceptions*

None have been identified at this time.

### 4.11 **Button Line Area – Add Account Not on File**

#### 4.11.1 *OK button*

##### 4.11.1.1 *Behavior*

If data is not present in the required fields the feedback message explains that a value needs to be entered in the field(s) that is/are blank. Two options are presented, OK and Cancel. OK takes the user back to the Add Account Not on File screen for data entry; Cancel dismisses the Add Account Not on File screen. OK will be the default selection.

##### 4.11.1.2 *Validation*

There must be data present in all fields except for Contact Last Name (4.9) and First Name (4.10) where only one needs to have data present.



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#### 4.11.1.3 Business Exceptions

None have been identified at this time.

#### 4.11.1.4 System Exceptions

None have been identified at this time.

#### 4.11.2 Cancel button

##### 4.11.2.1 Behavior

This button will dismiss the Add Account Not on File screen without saving any data.

##### 4.11.2.2 Validation

If data has been entered the following feedback message is displayed; "Are you sure you want to exit and lose the entered information?" Two options are presented, Yes and No.

Yes will dismiss the screen and not save the data, No will take the user back to the Add Account Not on File screen.

The default button selection is "No".

##### 4.11.2.3 Business Exceptions

None have been identified at this time.

##### 4.11.2.4 System Exceptions

None have been identified at this time.

### 5. New Contact (Figure 5)

#### 5.1 Last Name

##### 5.1.1 Behavior

This is a text field in which the user may enter a Contact's last name for an already selected Account.

##### 5.1.2 Validation

No validation is necessary.

##### 5.1.3 Business Exceptions

None have been identified at this time.

##### 5.1.4 System Exceptions

None have been identified at this time.

#### 5.2 First Name

##### 5.2.1 Behavior

This is a text field in which the user may enter a Contact's first name for an already selected Account.

##### 5.2.2 Validation

No validation is necessary.

##### 5.2.3 Business Exceptions

None have been identified at this time.

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#### 5.2.4 System Exceptions

None have been identified at this time.

### 5.3 Button Line Area – Add Contact

#### 5.3.1 OK button

##### 5.3.1.1 Behavior

If data is not present in the Last Name (5.1) and/or the First Name (5.2) field(s), the feedback message explains that a value needs to be entered for Last Name (5.1) and/or First Name (5.2). Two options are presented, OK and Cancel. OK takes the user back to the Add Contact screen for data entry, Cancel dismisses the Add Contact screen. OK will be the default selection.

##### 5.3.1.2 Validation

There must be data present in the Last Name (5.1) and/or First Name (5.2) field(s).

##### 5.3.1.3 Business Exceptions

None have been identified at this time.

##### 5.3.1.4 System Exceptions

None have been identified at this time.

#### 5.3.2 Cancel button

##### 5.3.2.1 Behavior

This button will dismiss the Add Contact screen without saving any data.

##### 5.3.2.2 Validation

If data has been entered the following feedback message is displayed; “Are you sure you want to exit and lose the entered information?” Two options are presented, Yes and No. Yes will dismiss the screen and not save the data, No will take the user back to the Add Contact screen. The default button selection is “No”.

##### 5.3.2.3 Business Exceptions

None have been identified at this time.

##### 5.3.2.4 System Exceptions

None have been identified at this time.

## 6. Rules

6.1 Year, Make and Model domain values come from the database.

6.2 A Contact must be selected for every Account that is selected as a Shop.

6.3 The system should not search for or display any deactivated Accounts.

6.4 User needs to have ability to cancel a search at any time during the search.

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**6.5 Notes should be generated when any of the following events occur:**

User adds a "Not on File" Shop	Shop [Blank] was changed to "XXXX"	Create/Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
User adds a "Not on File" Shop Contact	Not on File Contact "First Name Last Name" was added for Account "XXXXX"	Create/Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
User changes the Shop Account	Shop "XXXX" was changed to "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
User changes the Type of Loss	Type of Loss "XXXX" was changed to "XXXX"	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
User changes the "Total Loss?"	Total Loss "XXXX" was changed to "XXXX".	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
User changes the Date of Loss	Date of Loss "XXXXXX" was changed to "XXXXXX"	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop
User changes number of Theft Waiver Days	Theft Waiver Days "X" was changed to "X"	Edit	Create (if data exists from the reservation) /Edit	Vehicle/Shop (North America)
User changes the Registration Number	Registration Number "XXXX" was changed to "XXXX"	Edit	Edit	Vehicle/Shop (Ireland, UK, Germany)
User changes the Class	Class "XX" was changed to "XX"	Edit	Edit	Vehicle/Shop (Germany)
User changes the Renter's Vehicle's Year	The Renter's Vehicle Year "XXXX" was changed to Year "XXXX"	Edit	Edit	Vehicle/Shop
User changes the Renter's Vehicle's Make	The Renter's Vehicle Make "XXXX" was changed to Make "XXXX"	Edit	Edit	Vehicle/Shop
User changes the Renter's Vehicle's Model	The Renter's Vehicle Model "XXXX" was changed to Model "XXXX"	Edit	Edit	Vehicle/Shop
User changes the Renter's	The Renter's Vehicle Other Make "XXXX" was changed to "XXXX"	Edit	Edit	Vehicle/Shop

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Vehicle Other Make text				
User changes the Renter's Vehicle Other Model text	The Renter's Vehicle Other Model "XXXX" was changed to "XXXX"	Edit	Edit	Vehicle/Shop

## 7. Security

A user is authorized through a login process to create or edit a reservation or ticket.

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# Enterprise Rent-A-Car

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## ECARS 2.0 - Insurance Detail Information Screen Action Specification

1. The user will be able to view the insurance detail information for a specific rental car.

	Version: <1.0>
ECARS 2	Date: <dd/mm/yy>
<document identifier>	

## Revision History

Date	Version	Description	Author
04/12/2001	0.0	Created Template	Marty Tichy
04/16/2001	1.0	Created document	Maribeth Concannon
06/18/2001	1.1	Updated screen shots	Marty Tichy
07/18/2001	1.1	Updated validation of expiration date. Removed "The field is optional."	Maribeth Concannon
09/06/2001	1.2	Updated with changes from Navigation use case. Updated screen shot and button line.	James Atteberry

	Version: <1.0>
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## Screen Action Specification

### 1. Introduction

This document will describe the behavioral characteristics associated with the Insurance Details screen.

The system must be able to distinguish, presumably by the terminal ID, the proper screen language presentation as well as any field formatting applicable to that particular locale.

### 2. Screen Print

**Insurance Detail - Microsoft Internet Explorer provided by Enterprise Rent-a-Car**

Reservation Contracts Callbacks

**DRIVERS**  
James Atteberry  
Additional Drivers: 2  
Atteberry, James Smith, Chris Cloud, Kevin

**REFERRAL**  
Account Name  
Contact Name

**DATES/RATES**  
08/27/2001; ECAR  
Daily Rate; ASD

**BILL-TO**  
Account Name  
Contact Name

**VEHICLE/SHOP**  
1997 Dodge Avenger  
Shop Account Name

**NOTES**  
Notes Taken: 1  
Changed: 08/27/2001

**Drivers - Insurance Detail** - Options - Go X

Driver Other Address Insurance Detail Cash Qualification

**Insurance Details**

Carrier Agent Phone

Insurance Company Contact Policy Number Expiration Date (MM/DD/YYYY)

Comprehensive Deductible Collision Deductible Liability?

Assigned Risk? Lienholder Policy?

Back Complete

Res - 411781 Tkt - 234567 Chk - 363221

Figure 1 - Insurance Detail

-1 mon		July 2001					+1 mon	
Sun	Mon	Tue	Wed	Thu	Fri	Sat		
1	2	3	4	5	6	7		
8	9	10	11	12	13	14		
15	16	17	18	19	20	21		
22	23	24	25	26	27	28		
29	30	31						

Figure 2 - Date selection

	Version: <1.0>
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### **3. Insurance Details**

#### **3.1 Carrier**

##### **3.1.1 Behavior**

This is an alphanumeric field.

##### **3.1.2 Validation**

No validation is necessary. See Rules regarding when the field is required.

##### **3.1.3 Business Exceptions**

None have been identified at this time.

##### **3.1.4 System Exceptions**

None have been identified at this time.

#### **3.2 Agent**

##### **3.2.1 Behavior**

This is an alphanumeric field.

##### **3.2.2 Validation**

No validation is necessary. The field is optional.

##### **3.2.3 Business Exceptions**

None have been identified at this time.

##### **3.2.4 System Exceptions**

None have been identified at this time.

#### **3.3 Phone**

##### **3.3.1 Behavior**

This is an alphanumeric field. It should comply with the standard phone number field formatting. (06/05/2001- To date, no European considerations have been noted (waiting on update to Use Case).

##### **3.3.2 Validation**

The field is optional.

It should be edited to comply with the locale's format (i.e. in the United States, the length is 10 digits and include delimiters after the 3<sup>rd</sup> and 6<sup>th</sup> characters. If no delimiters are used, but 10 digits are entered, that is also valid.)

##### **3.3.3 Business Exceptions**

None have been identified at this time.

##### **3.3.4 System Exceptions**

None have been identified at this time.

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### 3.4 Insurance Company Contact

#### 3.4.1 Behavior

This is an alphanumeric field.

#### 3.4.2 Validation

No validation is necessary. See Rules regarding when the field is required.

#### 3.4.3 Business Exceptions

None have been identified at this time.

#### 3.4.4 System Exceptions

None have been identified at this time.

### 3.5 Policy Number

#### 3.5.1 Behavior

This is an alphanumeric field.

#### 3.5.2 Validation

No validation is necessary. See Rules regarding when the field is required.

#### 3.5.3 Business Exceptions

None have been identified at this time.

#### 3.5.4 System Exceptions

None have been identified at this time.

### 3.6 Expiration Date

#### 3.6.1 Behavior

Only numeric values and delineating characters will be accepted into this area.

Associated with this field is a calendar function that allows the user to select a date from a calendar screen instead of entering a value. Clicking on the calendar icon will display the screen; once a date is selected from the screen the **Expiration Date** field will be populated with the appropriate date.

See Rules regarding when the field is required.

#### 3.6.2 Validation

The date should be the current date or a date in the future.

#### 3.6.3 Business Exceptions

None have been identified at this time.

#### 3.6.4 System Exceptions

None have been identified at this time.

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### **3.7 Comprehensive Deductible**

#### **3.7.1 Behavior**

This is a numeric field.

#### **3.7.2 Validation**

No validation is necessary. See Rules regarding when the field is required.

#### **3.7.3 Business Exceptions**

None have been identified at this time.

#### **3.7.4 System Exceptions**

None have been identified at this time.

### **3.8 Collision Deductible**

#### **3.8.1 Behavior**

This is a numeric field.

#### **3.8.2 Validation**

No validation is necessary. See Rules regarding when the field is required.

#### **3.8.3 Business Exceptions**

None have been identified at this time.

#### **3.8.4 System Exceptions**

None have been identified at this time.

### **3.9 Liability?**

#### **3.9.1 Behavior**

The response is either 'Yes' or 'No', but the response is optional. There is no default value.

#### **3.9.2 Validation**

No validation is necessary. See Rules regarding when the field is required.

#### **3.9.3 Business Exceptions**

None have been identified at this time.

#### **3.9.4 System Exceptions**

None have been identified at this time.

### **3.10 Assigned Risk?**

#### **3.10.1 Behavior**

The response is either 'Yes' or 'No', but the response is optional. There is no default value.

#### **3.10.2 Validation**

No validation is necessary. The field is optional.

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### 3.10.3 *Business Exceptions*

None have been identified at this time.

### 3.10.4 *System Exceptions*

None have been identified at this time.

## **3.11 Lienholder Policy?**

### 3.11.1 Behavior

The response is either 'Yes' or 'No', but the response is optional. There is no default value.

### 3.11.2 *Validation*

No validation is necessary. The field is optional.

### 3.11.3 *Business Exceptions*

None have been identified at this time.

### 3.11.4 *System Exceptions*

None have been identified at this time.

## **4. Button Line Area**

### **4.1 Back button**

#### 4.1.1 *Behavior*

The Back button will take the user to the main Driver screen for the currently selected driver.

#### 4.1.2 *Validation*

No validation is necessary.

#### 4.1.3 *Business Exceptions*

None have been identified at this time.

#### 4.1.4 *System Exceptions*

None have been identified at this time.

### **4.2 Complete button**

#### 4.2.1 *Behavior*

The Complete button will initiate a save of the transaction. All validations will be performed, returning any errors to the user. If there are no errors, the transaction is saved, and the user is returned to the Reservation home page.

#### 4.2.2 *Validation*

No validation is necessary.

#### 4.2.3 *Business Exceptions*

None have been identified at this time.

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#### 4.2.4 System Exceptions

None have been identified at this time.

## 5. Rules

### 5.1 Required Fields

These fields are only required if information is present in any one of the following fields: Carrier, Policy Number, Expiration Date, Collision Deductible, Comprehensive Deductible, Liability, Insurance Company Contact. If the system determines that any of the listed fields are missing information, the system will present the user with a feedback message listing the incomplete required fields and directing them to complete them.

### 5.2 Saving

Because none of the information on the screen is required, the user can leave the screen at any time during the course of making or editing the reservation or while opening, editing or closing the open ticket Unless any of the fields in SUPL 76 are present.. The save is completed when the user saves the reservation or ticket.

### 5.3 Tabbing

Tabbing between fields should be in the order that they are in this document.

## 6. Security

The user must have the appropriate security level to access this screen.

---

# Enterprise Rent-A-Car

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## Rental Redesign/ECARS 2.0 Business Use-Case Specification: Callback Summary

Version 1.7

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## Revision History

Date	Version	Description	Author
01/02/2001	1.0	Started Callback Summary Use Case Document	Douglas Newton
01/03/2001	1.1	Added flows related to back/next and update message status controls.	Mike Meusey
01/04/2001	1.2	Added special conditions and issues to consolidate requirements from all other callback summary specs	Mike Meusey
01/05/2001	1.3	Added sequence diagrams	Mike Meusey
03/20/2001	1.4	Changed format to match with the standard. Added some missing flows from Functional specification.	Santhosh kumar
04/11/2001	1.5	Minor changes to flows. Added links. Formatting changes	Allison Bruhn
04/17/2001	1.6	Minor changes to flows. Took out referrals to panels to reflect more along the lines of the business functionality	Allison Bruhn
04/27/2001	1.7	Changes based on User Review. Altered table in 2.1.2 to make more understandable; added sentence about security in sections where the user is viewing contracts and then either has the authorization to only view or actually perform a callback; added an alternate flow for Search Callback; changed ALL option to ALL Contacts option; added in special requirements that the Number of Days Outstanding reason would be first rather than name (confirming); still need to make the bullets within Shop, Bill-To, and Renter consistent	Allison Bruhn
06/07/2001	1.8	Change Special Requirement to Clarify the sorting order for Customer List and Contact. <b>Original Text:</b> The customer list should be sorted alphabetically by the contact's last name and then first name, with the following exceptions. <b>Change To:</b> The customer list should be sorted alphabetically. Contact list is sort by last name and then first name, with the following exceptions	Pin Koh



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9/20/01	1.9	Removed Number of Days Outstanding from the special req. stating where it was to appear. Removed Contract Status from the Ticket Table.	L. Moellman
10/11/01	2.0	Added Print List flow.	L. Moellman

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## Business Use-Case Specification: Callback Summary

### 1. Callback Summary

#### 1.1 Brief Description

The purpose of this use case is to show what a user (a branch employee, call center) does to view a branch or group's list of callbacks needing to be performed for a given day. The user can select to view callbacks by a selected callback method whereby certain callback types are associated.

### 2. Flow of Events

#### 2.1 Basic Workflow

##### 2.1.1 Use Case Begins

This use case begins when a user chooses to view callbacks needing to be performed for a given day. The system retrieves all incomplete callbacks for the default group and branch (the default is the group and branch where the user logged in). If the user chooses to view callbacks for another branch within the group, see alternate flow view different branch. If the user chooses to view callbacks for an entire group, see alternate flow view different group. If the system does not retrieve any callbacks, see alternate flow no callbacks retrieved.

##### 2.1.2 Callback Method and Type Information

The user has the option to select a callback method and callback type associated with the selected method. The callback methods and callback types available to the user are highlighted in the table below:

<u>Callback Method</u>	<u>Callback Types Associate with the Method</u>
Manual Callback	<p>There are three types of callbacks associated to a Manual Callback. The user is able to select which type of callback to perform. The three types are listed below:</p> <ul style="list-style-type: none"> <li>• Shop</li> <li>• Bill-To</li> <li>• Renter</li> <li>• </li> </ul>
Automated, Fax, and Consolidated Callback	<ul style="list-style-type: none"> <li>• The two types of callbacks associated with the Automated, Fax, and Consolidated Callbacks are:</li> <li>• </li> <li>• Shop</li> <li>• Bill-To</li> <li>• </li> </ul>
Manual Shop	<ul style="list-style-type: none"> <li>• Upon entry to the Summary, Manual Shop callback</li> </ul>